SEQUENCE LISTING

<110> NatImmune A/S
Weilguny, Dietmar
Kongerslev, Leif
Matthiesen, Finn

<120> Collectin-complement activating protein chimeras

<130> P 703 PC00

<160> 147

<170> PatentIn version 3.4

<210> 1
<211> 185
<212> PRT
<213> Mus musculus

<400> 1

```
Met Arg Leu Leu Ile Phe Leu Gly Leu Leu Trp Ser Leu Val Ala Thr
1               5                   10                  15


Leu Leu Gly Ser Lys Trp Pro Glu Pro Val Phe Gly Arg Leu Val Ser
            20                  25                  30


Pro Gly Phe Pro Glu Lys Tyr Ala Asp His Gln Asp Arg Ser Trp Thr
        35                  40                  45


Leu Thr Ala Pro Pro Gly Tyr Arg Leu Arg Leu Tyr Phe Thr His Phe
    50                  55                  60


Asp Leu Glu Leu Ser Tyr Arg Cys Glu Tyr Asp Phe Val Lys Leu Ser
65                  70                  75                  80


Ser Gly Thr Lys Val Leu Ala Thr Leu Cys Gly Gln Glu Ser Thr Asp
                85                  90                  95


Thr Glu Gln Ala Pro Gly Asn Asp Thr Phe Tyr Ser Leu Gly Pro Ser
            100                 105                 110


Leu Lys Val Thr Phe His Ser Asp Tyr Ser Asn Glu Lys Pro Phe Thr
        115                 120                 125


Gly Phe Glu Ala Phe Tyr Ala Ala Glu Asp Val Asp Glu Cys Arg Val
    130                 135                 140
```

```
Ser Leu Gly Asp Ser Val Pro Cys Asp His Tyr Cys His Asn Tyr Leu
145                 150                 155                 160


Gly Gly Tyr Tyr Cys Ser Cys Arg Ala Gly Tyr Val Leu His Gln Asn
                165                 170                 175


Lys His Thr Cys Ser Glu Gln Ser Leu
            180                 185


<210>  2
<211>  244
<212>  PRT
<213>  Mus musculus

<400>  2

Met Ser Ile Phe Thr Ser Phe Leu Leu Leu Cys Val Val Thr Val Val
1               5                   10                  15


Tyr Ala Glu Thr Leu Thr Glu Gly Val Gln Asn Ser Cys Pro Val Val
            20                  25                  30


Thr Cys Ser Ser Pro Gly Leu Asn Gly Phe Pro Gly Lys Asp Gly Arg
        35                  40                  45


Asp Gly Ala Lys Gly Glu Lys Gly Glu Pro Gly Gln Gly Leu Arg Gly
    50                  55                  60


Leu Gln Gly Pro Pro Gly Lys Val Gly Pro Thr Gly Pro Pro Gly Asn
65                  70                  75                  80


Pro Gly Leu Lys Gly Ala Val Gly Pro Lys Gly Asp Arg Gly Asp Arg
                85                  90                  95


Ala Glu Phe Asp Thr Ser Glu Ile Asp Ser Glu Ile Ala Ala Leu Arg
            100                 105                 110


Ser Glu Leu Arg Ala Leu Arg Asn Trp Val Leu Phe Ser Leu Ser Glu
        115                 120                 125


Lys Val Gly Lys Lys Tyr Phe Val Ser Ser Val Lys Lys Met Ser Leu
    130                 135                 140


Asp Arg Val Lys Ala Leu Cys Ser Glu Phe Gln Gly Ser Val Ala Thr
145                 150                 155                 160
```

```
Pro Arg Asn Ala Glu Glu Asn Ser Ala Ile Gln Lys Val Ala Lys Asp
                165                 170                 175

Ile Ala Tyr Leu Gly Ile Thr Asp Val Arg Val Glu Gly Ser Phe Glu
            180                 185                 190

Asp Leu Thr Gly Asn Arg Val Arg Tyr Thr Asn Trp Asn Asp Gly Glu
        195                 200                 205

Pro Asn Asn Thr Gly Asp Gly Glu Asp Cys Val Val Ile Leu Gly Asn
    210                 215                 220

Gly Lys Trp Asn Asp Val Pro Cys Ser Asp Ser Phe Leu Ala Ile Cys
225                 230                 235                 240

Glu Phe Ser Asp
```

<210> 3
<211> 239
<212> PRT
<213> Mus musculus

<400> 3

```
Met Leu Leu Leu Pro Leu Leu Pro Val Leu Leu Cys Val Val Ser Val
1               5                   10                  15

Ser Ser Ser Gly Ser Gln Thr Cys Glu Asp Thr Leu Lys Thr Cys Ser
            20                  25                  30

Val Ile Ala Cys Gly Arg Asp Gly Arg Asp Gly Pro Lys Gly Glu Lys
        35                  40                  45

Gly Glu Pro Gly Gln Gly Leu Arg Gly Leu Gln Gly Pro Pro Gly Lys
    50                  55                  60

Leu Gly Pro Pro Gly Ser Val Gly Ser Pro Gly Ser Pro Gly Pro Lys
65                  70                  75                  80

Gly Gln Lys Gly Asp His Gly Asp Asn Arg Ala Ile Glu Glu Lys Leu
                85                  90                  95

Ala Asn Met Glu Ala Glu Ile Arg Ile Leu Lys Ser Lys Leu Gln Leu
            100                 105                 110
```

```
Thr Asn Lys Leu His Ala Phe Ser Met Gly Lys Lys Ser Gly Lys Lys
        115                 120                 125

Leu Phe Val Thr Asn His Glu Lys Met Pro Phe Ser Lys Val Lys Ser
    130                 135                 140

Leu Cys Thr Glu Leu Gln Gly Thr Val Ala Ile Pro Arg Asn Ala Glu
145                 150                 155                 160

Glu Asn Lys Ala Ile Gln Glu Val Ala Thr Gly Ile Ala Phe Leu Gly
                165                 170                 175

Ile Thr Asp Glu Ala Thr Glu Gly Gln Phe Met Tyr Val Thr Gly Gly
            180                 185                 190

Arg Leu Thr Tyr Ser Asn Trp Lys Lys Asp Glu Pro Asn Asn His Gly
        195                 200                 205

Ser Gly Glu Asp Cys Val Ile Ile Leu Asp Asn Gly Leu Trp Asn Asp
    210                 215                 220

Ile Ser Cys Gln Ala Ser Phe Lys Ala Val Cys Glu Phe Pro Ala
225                 230                 235
```

<210> 4
<211> 652
<212> PRT
<213> Homo sapiens

<400> 4

```
Met Ala Thr Ser Met Gly Leu Leu Leu Leu Leu Leu Leu Leu Leu Thr
1               5                   10                  15

Gln Pro Gly Ala Gly Thr Gly Ala Asp Thr Glu Ala Val Val Cys Val
            20                  25                  30

Gly Thr Ala Cys Tyr Thr Ala His Ser Gly Lys Leu Ser Ala Ala Glu
        35                  40                  45

Ala Gln Asn His Cys Asn Gln Asn Gly Gly Asn Leu Ala Thr Val Lys
    50                  55                  60

Ser Lys Glu Glu Ala Gln His Val Gln Arg Val Leu Ala Gln Leu Leu
```

```
65                  70                  75                  80

Arg Arg Glu Ala Ala Leu Thr Ala Arg Met Ser Lys Phe Trp Ile Gly
                85                  90                  95

Leu Gln Arg Glu Lys Gly Lys Cys Leu Asp Pro Ser Leu Pro Leu Lys
            100                 105                 110

Gly Phe Ser Trp Val Gly Gly Gly Glu Asp Thr Pro Tyr Ser Asn Trp
        115                 120                 125

His Lys Glu Leu Arg Asn Ser Cys Ile Ser Lys Arg Cys Val Ser Leu
    130                 135                 140

Leu Leu Asp Leu Ser Gln Pro Leu Leu Pro Ser Arg Leu Pro Lys Trp
145                 150                 155                 160

Ser Glu Gly Pro Cys Gly Ser Pro Gly Ser Pro Gly Ser Asn Ile Glu
                165                 170                 175

Gly Phe Val Cys Lys Phe Ser Phe Lys Gly Met Cys Arg Pro Leu Ala
            180                 185                 190

Leu Gly Gly Pro Gly Gln Val Thr Tyr Thr Thr Pro Phe Gln Thr Thr
        195                 200                 205

Ser Ser Ser Leu Glu Ala Val Pro Phe Ala Ser Ala Ala Asn Val Ala
    210                 215                 220

Cys Gly Glu Gly Asp Lys Asp Glu Thr Gln Ser His Tyr Phe Leu Cys
225                 230                 235                 240

Lys Glu Lys Ala Pro Asp Val Phe Asp Trp Gly Ser Ser Gly Pro Leu
                245                 250                 255

Cys Val Ser Pro Lys Tyr Gly Cys Asn Phe Asn Asn Gly Gly Cys His
            260                 265                 270

Gln Asp Cys Phe Glu Gly Gly Asp Gly Ser Phe Leu Cys Gly Cys Arg
        275                 280                 285

Pro Gly Phe Arg Leu Leu Asp Asp Leu Val Thr Cys Ala Ser Arg Asn
    290                 295                 300
```

```
Pro Cys Ser Ser Ser Pro Cys Arg Gly Gly Ala Thr Cys Val Leu Gly
305                 310                 315                 320

Pro His Gly Lys Asn Tyr Thr Cys Arg Cys Pro Gln Gly Tyr Gln Leu
                325                 330                 335

Asp Ser Ser Gln Leu Asp Cys Val Asp Val Asp Glu Cys Gln Asp Ser
            340                 345                 350

Pro Cys Ala Gln Glu Cys Val Asn Thr Pro Gly Gly Phe Arg Cys Glu
        355                 360                 365

Cys Trp Val Gly Tyr Glu Pro Gly Gly Pro Gly Glu Gly Ala Cys Gln
    370                 375                 380

Asp Val Asp Glu Cys Ala Leu Gly Arg Ser Pro Cys Ala Gln Gly Cys
385                 390                 395                 400

Thr Asn Thr Asp Gly Ser Phe His Cys Ser Cys Glu Glu Gly Tyr Val
                405                 410                 415

Leu Ala Gly Glu Asp Gly Thr Gln Cys Gln Asp Val Asp Glu Cys Val
            420                 425                 430

Gly Pro Gly Gly Pro Leu Cys Asp Ser Leu Cys Phe Asn Thr Gln Gly
        435                 440                 445

Ser Phe His Cys Gly Cys Leu Pro Gly Trp Val Leu Ala Pro Asn Gly
    450                 455                 460

Val Ser Cys Thr Met Gly Pro Val Ser Leu Gly Pro Pro Ser Gly Pro
465                 470                 475                 480

Pro Asp Glu Glu Asp Lys Gly Glu Lys Glu Gly Ser Thr Val Pro Arg
                485                 490                 495

Ala Ala Thr Ala Ser Pro Thr Arg Gly Pro Glu Gly Thr Pro Lys Ala
            500                 505                 510

Thr Pro Thr Thr Ser Arg Pro Ser Leu Ser Ser Asp Ala Pro Ile Thr
        515                 520                 525

Ser Ala Pro Leu Lys Met Leu Ala Pro Ser Gly Ser Pro Gly Val Trp
```

```
    530                 535                 540

Arg Glu Pro Ser Ile His His Ala Thr Ala Ala Ser Gly Pro Gln Glu
545                 550                 555                 560

Pro Ala Gly Gly Asp Ser Ser Val Ala Thr Gln Asn Asn Asp Gly Thr
                565                 570                 575

Asp Gly Gln Lys Leu Leu Leu Phe Tyr Ile Leu Gly Thr Val Val Ala
            580                 585                 590

Ile Leu Leu Leu Leu Ala Leu Ala Leu Gly Leu Leu Val Tyr Arg Lys
        595                 600                 605

Arg Arg Ala Lys Arg Glu Glu Lys Lys Glu Lys Lys Pro Gln Asn Ala
    610                 615                 620

Ala Asp Ser Tyr Ser Trp Val Pro Glu Arg Ala Glu Ser Arg Ala Met
625                 630                 635                 640

Glu Asn Gln Tyr Ser Pro Thr Pro Gly Thr Asp Cys
                645                 650
```

<210> 5
<211> 644
<212> PRT
<213> Mus musculus

<400> 5

```
Met Ala Ile Ser Thr Gly Leu Phe Leu Leu Leu Gly Leu Leu Gly Gln
1               5                   10                  15

Pro Trp Ala Gly Ala Ala Ala Asp Ser Gln Ala Val Val Cys Glu Gly
            20                  25                  30

Thr Ala Cys Tyr Thr Ala His Trp Gly Lys Leu Ser Ala Ala Glu Ala
        35                  40                  45

Gln His Arg Cys Asn Glu Asn Gly Gly Asn Leu Ala Thr Val Lys Ser
    50                  55                  60

Glu Glu Glu Ala Arg His Val Gln Gln Ala Leu Thr Gln Leu Leu Lys
65                  70                  75                  80
```

```
Thr Lys Ala Pro Leu Glu Ala Lys Met Gly Lys Phe Trp Ile Gly Leu
                85                  90                  95

Gln Arg Glu Lys Gly Asn Cys Thr Tyr His Asp Leu Pro Met Arg Gly
            100                 105                 110

Phe Ser Trp Val Gly Gly Gly Glu Asp Thr Ala Tyr Ser Asn Trp Tyr
        115                 120                 125

Lys Ala Ser Lys Ser Ser Cys Ile Phe Lys Arg Cys Val Ser Leu Ile
    130                 135                 140

Leu Asp Leu Ser Leu Thr Pro His Pro Ser His Leu Pro Lys Trp His
145                 150                 155                 160

Glu Ser Pro Cys Gly Thr Pro Glu Ala Pro Gly Asn Ser Ile Glu Gly
                165                 170                 175

Phe Leu Cys Lys Phe Asn Phe Lys Gly Met Cys Arg Pro Leu Ala Leu
            180                 185                 190

Gly Gly Pro Gly Arg Val Thr Tyr Thr Thr Pro Phe Gln Ala Thr Thr
        195                 200                 205

Ser Ser Leu Glu Ala Val Pro Phe Ala Ser Val Ala Asn Val Ala Cys
    210                 215                 220

Gly Asp Glu Ala Lys Ser Glu Thr His Tyr Phe Leu Cys Asn Glu Lys
225                 230                 235                 240

Thr Pro Gly Ile Phe His Trp Gly Ser Ser Gly Pro Leu Cys Val Ser
                245                 250                 255

Pro Lys Phe Gly Cys Ser Phe Asn Asn Gly Gly Cys Gln Gln Asp Cys
            260                 265                 270

Phe Glu Gly Gly Asp Gly Ser Phe Arg Cys Gly Cys Arg Pro Gly Phe
        275                 280                 285

Arg Leu Leu Asp Asp Leu Val Thr Cys Ala Ser Arg Asn Pro Cys Ser
    290                 295                 300

Ser Asn Pro Cys Thr Gly Gly Gly Met Cys His Ser Val Pro Leu Ser
305                 310                 315                 320
```

```
Glu Asn Tyr Thr Cys Arg Cys Pro Ser Gly Tyr Gln Leu Asp Ser Ser
                325                 330                 335

Gln Val His Cys Val Asp Ile Asp Glu Cys Gln Asp Ser Pro Cys Ala
            340                 345                 350

Gln Asp Cys Val Asn Thr Leu Gly Ser Phe His Cys Glu Cys Trp Val
        355                 360                 365

Gly Tyr Gln Pro Ser Gly Pro Lys Glu Glu Ala Cys Glu Asp Val Asp
    370                 375                 380

Glu Cys Ala Ala Ala Asn Ser Pro Cys Ala Gln Gly Cys Ile Asn Thr
385                 390                 395                 400

Asp Gly Ser Phe Tyr Cys Ser Cys Lys Glu Gly Tyr Ile Val Ser Gly
                405                 410                 415

Glu Asp Ser Thr Gln Cys Glu Asp Ile Asp Glu Cys Ser Asp Ala Arg
            420                 425                 430

Gly Asn Pro Cys Asp Ser Leu Cys Phe Asn Thr Asp Gly Ser Phe Arg
        435                 440                 445

Cys Gly Cys Pro Pro Gly Trp Glu Leu Ala Pro Asn Gly Val Phe Cys
    450                 455                 460

Ser Arg Gly Thr Val Phe Ser Glu Leu Pro Ala Arg Pro Pro Gln Lys
465                 470                 475                 480

Glu Asp Asn Asp Asp Arg Lys Glu Ser Thr Met Pro Pro Thr Glu Met
                485                 490                 495

Pro Ser Ser Pro Ser Gly Ser Lys Asp Val Ser Asn Arg Ala Gln Thr
            500                 505                 510

Thr Gly Leu Phe Val Gln Ser Asp Ile Pro Thr Ala Ser Val Pro Leu
        515                 520                 525

Glu Ile Glu Ile Pro Ser Glu Val Ser Asp Val Trp Phe Glu Leu Gly
    530                 535                 540
```

```
Thr Tyr Leu Pro Thr Thr Ser Gly His Ser Lys Pro Thr His Glu Asp
545                 550                 555                 560

Ser Val Ser Ala His Ser Asp Thr Asp Gly Gln Asn Leu Leu Leu Phe
                565                 570                 575

Tyr Ile Leu Gly Thr Val Val Ala Ile Ser Leu Leu Leu Val Leu Ala
            580                 585                 590

Leu Gly Ile Leu Ile Tyr His Lys Arg Arg Ala Lys Lys Glu Glu Ile
        595                 600                 605

Lys Glu Lys Lys Pro Gln Asn Ala Ala Asp Ser Tyr Ser Trp Val Pro
    610                 615                 620

Glu Arg Ala Glu Ser Gln Ala Pro Glu Asn Gln Tyr Ser Pro Thr Pro
625                 630                 635                 640

Gly Thr Asp Cys
```

<210> 6
<211> 688
<212> PRT
<213> Homo sapiens

<400> 6

```
Met Trp Cys Ile Val Leu Phe Ser Leu Leu Ala Trp Val Tyr Ala Glu
1               5                   10                  15

Pro Thr Met Tyr Gly Glu Ile Leu Ser Pro Asn Tyr Pro Gln Ala Tyr
            20                  25                  30

Pro Ser Glu Val Glu Lys Ser Trp Asp Ile Glu Val Pro Glu Gly Tyr
        35                  40                  45

Gly Ile His Leu Tyr Phe Thr His Leu Asp Ile Glu Leu Ser Glu Asn
    50                  55                  60

Cys Ala Tyr Asp Ser Val Gln Ile Ile Ser Gly Asp Thr Glu Glu Gly
65                  70                  75                  80

Arg Leu Cys Gly Gln Arg Ser Ser Asn Asn Pro His Ser Pro Ile Val
                85                  90                  95
```

```
Glu Glu Phe Gln Val Pro Tyr Asn Lys Leu Gln Val Ile Phe Lys Ser
            100                 105                 110

Asp Phe Ser Asn Glu Glu Arg Phe Thr Gly Phe Ala Ala Tyr Tyr Val
        115                 120                 125

Ala Thr Asp Ile Asn Glu Cys Thr Asp Phe Val Asp Val Pro Cys Ser
    130                 135                 140

His Phe Cys Asn Asn Phe Ile Gly Gly Tyr Phe Cys Ser Cys Pro Pro
145                 150                 155                 160

Glu Tyr Phe Leu His Asp Asp Met Lys Asn Cys Gly Val Asn Cys Ser
                165                 170                 175

Gly Asp Val Phe Thr Ala Leu Ile Gly Glu Ile Ala Ser Pro Asn Tyr
            180                 185                 190

Pro Lys Pro Tyr Pro Glu Asn Ser Arg Cys Glu Tyr Gln Ile Arg Leu
        195                 200                 205

Glu Lys Gly Phe Gln Val Val Val Thr Leu Arg Arg Glu Asp Phe Asp
    210                 215                 220

Val Glu Ala Ala Asp Ser Ala Gly Asn Cys Leu Asp Ser Leu Val Phe
225                 230                 235                 240

Val Ala Gly Asp Arg Gln Phe Gly Pro Tyr Cys Gly His Gly Phe Pro
                245                 250                 255

Gly Pro Leu Asn Ile Glu Thr Lys Ser Asn Ala Leu Asp Ile Ile Phe
            260                 265                 270

Gln Thr Asp Leu Thr Gly Gln Lys Lys Gly Trp Lys Leu Arg Tyr His
        275                 280                 285

Gly Asp Pro Met Pro Cys Pro Lys Glu Asp Thr Pro Asn Ser Val Trp
    290                 295                 300

Glu Pro Ala Lys Ala Lys Tyr Val Phe Arg Asp Val Val Gln Ile Thr
305                 310                 315                 320

Cys Leu Asp Gly Phe Glu Val Val Glu Gly Arg Val Gly Ala Thr Ser
```

```
                325                 330                 335

Phe Tyr Ser Thr Cys Gln Ser Asn Gly Lys Trp Ser Asn Ser Lys Leu
            340                 345                 350

Lys Cys Gln Pro Val Asp Cys Gly Ile Pro Glu Ser Ile Glu Asn Gly
        355                 360                 365

Lys Val Glu Asp Pro Glu Ser Thr Leu Phe Gly Ser Val Ile Arg Tyr
    370                 375                 380

Thr Cys Glu Glu Pro Tyr Tyr Tyr Met Glu Asn Gly Gly Gly Gly Glu
385                 390                 395                 400

Tyr His Cys Ala Gly Asn Gly Ser Trp Val Asn Glu Val Leu Gly Pro
                405                 410                 415

Glu Leu Pro Lys Cys Val Pro Val Cys Gly Val Pro Arg Glu Pro Phe
            420                 425                 430

Glu Glu Lys Gln Arg Ile Ile Gly Gly Ser Asp Ala Asp Ile Lys Asn
        435                 440                 445

Phe Pro Trp Gln Val Phe Phe Asp Asn Pro Trp Ala Gly Gly Ala Leu
    450                 455                 460

Ile Asn Glu Tyr Trp Val Leu Thr Ala Ala His Val Val Glu Gly Asn
465                 470                 475                 480

Arg Glu Pro Thr Met Tyr Val Gly Ser Thr Ser Val Gln Thr Ser Arg
                485                 490                 495

Leu Ala Lys Ser Lys Met Leu Thr Pro Glu His Val Phe Ile His Pro
            500                 505                 510

Gly Trp Lys Leu Leu Glu Val Pro Glu Gly Arg Thr Asn Phe Asp Asn
        515                 520                 525

Asp Ile Ala Leu Val Arg Leu Lys Asp Pro Val Lys Met Gly Pro Thr
    530                 535                 540

Val Ser Pro Ile Cys Leu Pro Gly Thr Ser Ser Asp Tyr Asn Leu Met
545                 550                 555                 560
```

```
Asp Gly Asp Leu Gly Leu Ile Ser Gly Trp Gly Arg Thr Glu Lys Arg
                565                 570                 575

Asp Arg Ala Val Arg Leu Lys Ala Ala Arg Leu Pro Val Ala Pro Leu
            580                 585                 590

Arg Lys Cys Lys Glu Val Lys Val Glu Lys Pro Thr Ala Asp Ala Glu
        595                 600                 605

Ala Tyr Val Phe Thr Pro Asn Met Ile Cys Ala Gly Gly Glu Lys Gly
    610                 615                 620

Met Asp Ser Cys Lys Gly Asp Ser Gly Gly Ala Phe Ala Val Gln Asp
625                 630                 635                 640

Pro Asn Asp Lys Thr Lys Phe Tyr Ala Ala Gly Leu Val Ser Trp Gly
                645                 650                 655

Pro Gln Cys Gly Thr Tyr Gly Leu Tyr Thr Arg Val Lys Asn Tyr Val
            660                 665                 670

Asp Trp Ile Met Lys Thr Met Gln Glu Asn Ser Thr Pro Arg Glu Asp
        675                 680                 685
```

<210> 7
<211> 652
<212> PRT
<213> Homo sapiens

<400> 7

```
Met Ala Thr Ser Met Gly Leu Leu Leu Leu Leu Leu Leu Leu Leu Thr
1               5                   10                  15

Gln Pro Gly Ala Gly Thr Gly Ala Asp Thr Glu Ala Val Val Cys Val
            20                  25                  30

Gly Thr Ala Cys Tyr Thr Ala His Ser Gly Lys Leu Ser Ala Ala Glu
        35                  40                  45

Ala Gln Asn His Cys Asn Gln Asn Gly Gly Asn Leu Ala Thr Val Lys
    50                  55                  60

Ser Lys Glu Glu Ala Gln His Val Gln Arg Val Leu Ala Gln Leu Leu
65                  70                  75                  80
```

```
Arg Arg Glu Ala Ala Leu Thr Ala Arg Met Ser Lys Phe Trp Ile Gly
                85                  90                  95

Leu Gln Arg Glu Lys Gly Lys Cys Leu Asp Pro Ser Leu Pro Leu Lys
            100                 105                 110

Gly Phe Ser Trp Val Gly Gly Gly Glu Asp Thr Pro Tyr Ser Asn Trp
        115                 120                 125

His Lys Glu Leu Arg Asn Ser Cys Ile Ser Lys Arg Cys Val Ser Leu
    130                 135                 140

Leu Leu Asp Leu Ser Gln Pro Leu Leu Pro Asn Arg Leu Pro Lys Trp
145                 150                 155                 160

Ser Glu Gly Pro Cys Gly Ser Pro Gly Ser Pro Gly Ser Asn Ile Glu
                165                 170                 175

Gly Phe Val Cys Lys Phe Ser Phe Lys Gly Met Cys Arg Pro Leu Ala
            180                 185                 190

Leu Gly Gly Pro Gly Gln Val Thr Tyr Thr Thr Pro Phe Gln Thr Thr
        195                 200                 205

Ser Ser Ser Leu Glu Ala Val Pro Phe Ala Ser Ala Ala Asn Val Ala
    210                 215                 220

Cys Gly Glu Gly Asp Lys Asp Glu Thr Gln Ser His Tyr Phe Leu Cys
225                 230                 235                 240

Lys Glu Lys Ala Pro Asp Val Phe Asp Trp Gly Ser Ser Gly Pro Leu
                245                 250                 255

Cys Val Ser Pro Lys Tyr Gly Cys Asn Phe Asn Asn Gly Gly Cys His
            260                 265                 270

Gln Asp Cys Phe Glu Gly Gly Asp Gly Ser Phe Leu Cys Gly Cys Arg
        275                 280                 285

Pro Gly Phe Arg Leu Leu Asp Asp Leu Val Thr Cys Ala Ser Arg Asn
    290                 295                 300
```

```
Pro Cys Ser Ser Ser Pro Cys Arg Gly Gly Ala Thr Cys Val Leu Gly
305                 310                 315                 320

Pro His Gly Lys Asn Tyr Thr Cys Arg Cys Pro Gln Gly Tyr Gln Leu
                325                 330                 335

Asp Ser Ser Gln Leu Asp Cys Val Asp Val Asp Glu Cys Gln Asp Ser
            340                 345                 350

Pro Cys Ala Gln Glu Cys Val Asn Thr Pro Gly Gly Phe Arg Cys Glu
        355                 360                 365

Cys Trp Val Gly Tyr Glu Pro Gly Gly Pro Gly Glu Gly Ala Cys Gln
    370                 375                 380

Asp Val Asp Glu Cys Ala Leu Gly Arg Ser Pro Cys Ala Gln Gly Cys
385                 390                 395                 400

Thr Asn Thr Asp Gly Ser Phe His Cys Ser Cys Glu Glu Gly Tyr Val
                405                 410                 415

Leu Ala Gly Glu Asp Gly Thr Gln Cys Gln Asp Val Asp Glu Cys Val
            420                 425                 430

Gly Pro Gly Gly Pro Leu Cys Asp Ser Leu Cys Phe Asn Thr Gln Gly
        435                 440                 445

Ser Phe His Cys Gly Cys Leu Pro Gly Trp Val Leu Ala Pro Asn Gly
    450                 455                 460

Val Ser Cys Thr Met Gly Pro Val Ser Leu Gly Pro Pro Ser Gly Pro
465                 470                 475                 480

Pro Asp Glu Glu Asp Lys Gly Glu Lys Glu Gly Ser Thr Val Pro Arg
                485                 490                 495

Ala Ala Thr Ala Ser Pro Thr Arg Gly Pro Glu Gly Thr Pro Lys Ala
            500                 505                 510

Thr Pro Thr Thr Ser Arg Pro Ser Leu Ser Ser Asp Ala Pro Ile Thr
        515                 520                 525

Ser Ala Pro Leu Lys Met Leu Ala Pro Ser Gly Ser Ser Gly Val Trp
    530                 535                 540
```

```
Arg Glu Pro Ser Ile His His Ala Thr Ala Ala Ser Gly Pro Gln Glu
545                 550                 555                 560

Pro Ala Gly Gly Asp Ser Ser Val Ala Thr Gln Asn Asn Asp Gly Thr
                565                 570                 575

Asp Gly Gln Lys Leu Leu Leu Phe Tyr Ile Leu Gly Thr Val Val Ala
            580                 585                 590

Ile Leu Leu Leu Leu Ala Leu Ala Leu Gly Leu Leu Val Tyr Arg Lys
        595                 600                 605

Arg Arg Ala Lys Arg Glu Glu Lys Lys Glu Lys Lys Pro Gln Asn Ala
    610                 615                 620

Ala Asp Ser Tyr Ser Trp Val Pro Glu Arg Ala Glu Ser Arg Ala Met
625                 630                 635                 640

Glu Asn Gln Tyr Ser Pro Thr Pro Gly Thr Asp Cys
                645                 650
```

<210> 8
<211> 248
<212> PRT
<213> Homo sapiens

<400> 8

```
Met Ser Leu Phe Pro Ser Leu Pro Leu Leu Leu Leu Ser Met Val Ala
1               5                   10                  15

Ala Ser Tyr Ser Glu Thr Val Thr Cys Glu Asp Ala Gln Lys Thr Cys
            20                  25                  30

Pro Ala Val Ile Ala Cys Ser Ser Pro Gly Ile Asn Gly Phe Pro Gly
        35                  40                  45

Lys Asp Gly Arg Asp Gly Thr Lys Gly Glu Lys Gly Glu Pro Gly Gln
    50                  55                  60

Gly Leu Arg Gly Leu Gln Gly Pro Pro Gly Lys Leu Gly Pro Pro Gly
65                  70                  75                  80

Asn Pro Gly Pro Ser Gly Ser Pro Gly Pro Lys Gly Gln Lys Gly Asp
```

```
                85                  90                  95

Pro Gly Lys Ser Pro Asp Gly Asp Ser Ser Leu Ala Ala Ser Glu Arg
            100                 105                 110

Lys Ala Leu Gln Thr Glu Met Ala Arg Ile Lys Lys Trp Leu Thr Phe
        115                 120                 125

Ser Leu Gly Lys Gln Val Gly Asn Lys Phe Phe Leu Thr Asn Gly Glu
    130                 135                 140

Ile Met Thr Phe Glu Lys Val Lys Ala Leu Cys Val Lys Phe Gln Ala
145                 150                 155                 160

Ser Val Ala Thr Pro Arg Asn Ala Ala Glu Asn Gly Ala Ile Gln Asn
                165                 170                 175

Leu Ile Lys Glu Glu Ala Phe Leu Gly Ile Thr Asp Glu Lys Thr Glu
            180                 185                 190

Gly Gln Phe Val Asp Leu Thr Gly Asn Arg Leu Thr Tyr Thr Asn Trp
        195                 200                 205

Asn Glu Gly Glu Pro Asn Asn Ala Gly Ser Asp Glu Asp Cys Val Leu
    210                 215                 220

Leu Leu Lys Asn Gly Gln Trp Asn Asp Val Pro Cys Ser Thr Ser His
225                 230                 235                 240

Leu Ala Val Cys Glu Phe Pro Ile
                245
```

<210> 9
<211> 248
<212> PRT
<213> Homo sapiens

<400> 9

```
Met Ser Leu Phe Pro Ser Leu Pro Leu Leu Leu Leu Ser Met Val Ala
1               5                   10                  15

Ala Ser Tyr Ser Glu Thr Val Thr Cys Glu Asp Ala Gln Lys Thr Cys
            20                  25                  30
```

```
Pro Ala Val Ile Ala Cys Ser Ser Pro Gly Ile Asn Gly Phe Pro Gly
        35                  40                  45

Lys Asp Gly Arg Asp Gly Thr Lys Gly Glu Lys Gly Glu Pro Gly Gln
    50                  55                  60

Gly Leu Arg Gly Leu Gln Gly Pro Pro Gly Lys Leu Gly Pro Pro Gly
65                  70                  75                  80

Asn Pro Gly Pro Ser Gly Ser Pro Gly Pro Lys Gly Gln Lys Gly Asp
                85                  90                  95

Pro Gly Lys Ser Pro Asp Gly Asp Ser Ser Leu Ala Ala Ser Glu Arg
            100                 105                 110

Lys Ala Leu Gln Thr Glu Met Ala Arg Ile Lys Lys Trp Leu Thr Phe
        115                 120                 125

Ser Leu Gly Lys Gln Val Gly Asn Lys Phe Phe Leu Thr Asn Gly Glu
    130                 135                 140

Ile Met Thr Phe Glu Lys Val Lys Ala Leu Cys Val Lys Phe Gln Ala
145                 150                 155                 160

Ser Val Ala Thr Pro Arg Asn Ala Ala Glu Asn Gly Ala Ile Gln Asn
                165                 170                 175

Leu Ile Lys Glu Glu Ala Phe Leu Gly Ile Thr Asp Glu Lys Thr Glu
            180                 185                 190

Gly Gln Phe Val Asp Leu Thr Gly Asn Arg Leu Thr Tyr Thr Asn Trp
        195                 200                 205

Asn Glu Gly Glu Pro Asn Asn Ala Gly Ser Asp Glu Asp Cys Val Leu
    210                 215                 220

Leu Leu Lys Asn Gly Gln Trp Asn Asp Val Pro Cys Ser Thr Ser His
225                 230                 235                 240

Leu Ala Val Cys Glu Phe Pro Ile
                245
```

<210> 10
<211> 643

<212> PRT
<213> Rattus norvegicus

<400> 10

```
Met Val Thr Ser Thr Gly Leu Leu Leu Leu Leu Gly Leu Leu Gly Gln
1               5                  10                  15

Leu Trp Ala Gly Ala Ala Ala Asp Ser Glu Ala Val Val Cys Glu Gly
            20                  25                  30

Thr Ala Cys Tyr Thr Ala His Trp Gly Lys Leu Ser Ala Ala Glu Ala
        35                  40                  45

Gln His Arg Cys Asn Glu Asn Gly Gly Asn Leu Ala Thr Val Lys Ser
    50                  55                  60

Glu Glu Glu Ala Arg His Val Gln Glu Ala Leu Ala Gln Leu Leu Lys
65                  70                  75                  80

Thr Lys Ala Pro Ser Glu Thr Lys Ile Gly Lys Phe Trp Ile Gly Leu
                85                  90                  95

Gln Arg Glu Lys Gly Lys Cys Thr Tyr His Asp Leu Pro Met Lys Gly
            100                 105                 110

Phe Ser Trp Val Gly Gly Gly Glu Asp Thr Thr Tyr Ser Asn Trp Tyr
        115                 120                 125

Lys Ala Ser Lys Ser Ser Cys Ile Ser Lys Arg Cys Val Ser Leu Ile
    130                 135                 140

Leu Asp Leu Ser Leu Lys Pro His Pro Ser His Leu Pro Lys Trp His
145                 150                 155                 160

Glu Ser Pro Cys Gly Thr Pro Asp Ala Pro Gly Asn Ser Ile Glu Gly
                165                 170                 175

Phe Leu Cys Lys Phe Asn Phe Lys Gly Met Cys Ser Pro Leu Ala Leu
            180                 185                 190

Gly Gly Pro Gly Gln Leu Thr Tyr Thr Thr Pro Phe Gln Ala Thr Thr
        195                 200                 205

Ser Ser Leu Lys Ala Val Pro Phe Ala Ser Val Ala Asn Val Val Cys
```

```
    210                 215                 220

Gly Asp Glu Ala Glu Ser Lys Thr Asn Tyr Tyr Leu Cys Lys Glu Thr
225                 230                 235                 240

Thr Ala Gly Val Phe His Trp Gly Ser Ser Gly Pro Leu Cys Val Ser
                245                 250                 255

Pro Lys Phe Gly Cys Ser Phe Asn Asn Gly Gly Cys Gln Gln Asp Cys
            260                 265                 270

Phe Glu Gly Gly Asp Gly Ser Phe Arg Cys Gly Cys Arg Pro Gly Phe
        275                 280                 285

Arg Leu Leu Asp Asp Leu Val Thr Cys Ala Ser Arg Asn Pro Cys Ser
    290                 295                 300

Ser Asn Pro Cys Thr Gly Gly Gly Met Cys His Ser Val Pro Leu Ser
305                 310                 315                 320

Glu Asn Tyr Thr Cys His Cys Pro Arg Gly Tyr Gln Leu Asp Ser Ser
                325                 330                 335

Gln Val His Cys Val Asp Ile Asp Glu Cys Glu Asp Ser Pro Cys Asp
            340                 345                 350

Gln Glu Cys Ile Asn Thr Pro Gly Gly Phe His Cys Glu Cys Trp Val
        355                 360                 365

Gly Tyr Gln Ser Ser Gly Ser Lys Glu Glu Ala Cys Glu Asp Val Asp
    370                 375                 380

Glu Cys Thr Ala Ala Tyr Ser Pro Cys Ala Gln Gly Cys Thr Asn Thr
385                 390                 395                 400

Asp Gly Ser Phe Tyr Cys Ser Cys Lys Glu Gly Tyr Ile Met Ser Gly
                405                 410                 415

Glu Asp Ser Thr Gln Cys Glu Asp Ile Asp Glu Cys Leu Gly Asn Pro
            420                 425                 430

Cys Asp Thr Leu Cys Ile Asn Thr Asp Gly Ser Phe Arg Cys Gly Cys
        435                 440                 445
```

```
Pro Ala Gly Phe Glu Leu Ala Pro Asn Gly Val Ser Cys Thr Arg Gly
    450                 455                 460

Ser Met Phe Ser Glu Leu Pro Ala Arg Pro Pro Gln Lys Glu Asp Lys
465                 470                 475                 480

Gly Asp Gly Lys Glu Ser Thr Val Pro Leu Thr Glu Met Pro Gly Ser
                485                 490                 495

Leu Asn Gly Ser Lys Asp Val Ser Asn Arg Ala Gln Thr Thr Asp Leu
            500                 505                 510

Ser Ile Gln Ser Asp Ser Ser Thr Ala Ser Val Pro Leu Glu Ile Glu
        515                 520                 525

Val Ser Ser Glu Ala Ser Asp Val Trp Leu Asp Leu Gly Thr Tyr Leu
    530                 535                 540

Pro Thr Thr Ser Gly His Ser Gln Pro Thr His Glu Asp Ser Val Pro
545                 550                 555                 560

Ala His Ser Asp Ser Asp Thr Asp Gly Gln Lys Leu Leu Leu Phe Tyr
                565                 570                 575

Ile Leu Gly Thr Val Val Ala Ile Ser Leu Leu Leu Ala Leu Ala Leu
            580                 585                 590

Gly Leu Leu Ile Tyr Leu Lys Arg Lys Ala Lys Lys Glu Glu Ile Lys
        595                 600                 605

Glu Lys Lys Ala Gln Asn Ala Ala Asp Ser Tyr Ser Trp Ile Pro Glu
    610                 615                 620

Arg Ala Glu Ser Arg Ala Pro Glu Asn Gln Tyr Ser Pro Thr Pro Gly
625                 630                 635                 640

Thr Asp Cys
```

<210> 11
<211> 686
<212> PRT
<213> Homo sapiens

<400> 11

```
Met Arg Leu Leu Thr Leu Leu Gly Leu Leu Cys Gly Ser Val Ala Thr
1               5                  10                  15

Pro Leu Gly Pro Lys Trp Pro Glu Pro Val Phe Gly Arg Leu Ala Ser
            20                  25                  30

Pro Gly Phe Pro Gly Glu Tyr Ala Asn Asp Gln Glu Arg Arg Trp Thr
        35                  40                  45

Leu Thr Ala Pro Pro Gly Tyr Arg Leu Arg Leu Tyr Phe Thr His Phe
    50                  55                  60

Asp Leu Glu Leu Ser His Leu Cys Glu Tyr Asp Phe Val Lys Leu Ser
65                  70                  75                  80

Ser Gly Ala Lys Val Leu Ala Thr Leu Cys Gly Gln Glu Ser Thr Asp
                85                  90                  95

Thr Glu Arg Ala Pro Gly Lys Asp Thr Phe Tyr Ser Leu Gly Ser Ser
            100                 105                 110

Leu Asp Ile Thr Phe Arg Ser Asp Tyr Ser Asn Glu Lys Pro Phe Thr
        115                 120                 125

Gly Phe Glu Ala Phe Tyr Ala Ala Glu Asp Ile Asp Glu Cys Gln Val
    130                 135                 140

Ala Pro Gly Glu Ala Pro Thr Cys Asp His His Cys His Asn His Leu
145                 150                 155                 160

Gly Gly Phe Tyr Cys Ser Cys Arg Ala Gly Tyr Val Leu His Arg Asn
                165                 170                 175

Lys Arg Thr Cys Ser Ala Leu Cys Ser Gly Gln Val Phe Thr Gln Arg
            180                 185                 190

Ser Gly Glu Leu Ser Ser Pro Glu Tyr Pro Arg Pro Tyr Pro Lys Leu
        195                 200                 205

Ser Ser Cys Thr Tyr Ser Ile Ser Leu Glu Glu Gly Phe Ser Val Ile
    210                 215                 220
```

```
Leu Asp Phe Val Glu Ser Phe Asp Val Glu Thr His Pro Glu Thr Leu
225                 230                 235                 240

Cys Pro Tyr Asp Phe Leu Lys Ile Gln Thr Asp Arg Glu Glu His Gly
                245                 250                 255

Pro Phe Cys Gly Lys Thr Leu Pro His Arg Ile Glu Thr Lys Ser Asn
            260                 265                 270

Thr Val Thr Ile Thr Phe Val Thr Asp Glu Ser Gly Asp His Thr Gly
        275                 280                 285

Trp Lys Ile His Tyr Thr Ser Thr Ala Gln Pro Cys Pro Tyr Pro Met
    290                 295                 300

Ala Pro Pro Asn Gly His Val Ser Pro Val Gln Ala Lys Tyr Ile Leu
305                 310                 315                 320

Lys Asp Ser Phe Ser Ile Phe Cys Glu Thr Gly Tyr Glu Leu Leu Gln
                325                 330                 335

Gly His Leu Pro Leu Lys Ser Phe Thr Ala Val Cys Gln Lys Asp Gly
            340                 345                 350

Ser Trp Asp Arg Pro Met Pro Ala Cys Ser Ile Val Asp Cys Gly Pro
        355                 360                 365

Pro Asp Asp Leu Pro Ser Gly Arg Val Glu Tyr Ile Thr Gly Pro Gly
    370                 375                 380

Val Thr Thr Tyr Lys Ala Val Ile Gln Tyr Ser Cys Glu Glu Thr Phe
385                 390                 395                 400

Tyr Thr Met Lys Val Asn Asp Gly Lys Tyr Val Cys Glu Ala Asp Gly
                405                 410                 415

Phe Trp Thr Ser Ser Lys Gly Glu Lys Ser Leu Pro Val Cys Glu Pro
            420                 425                 430

Val Cys Gly Leu Ser Ala Arg Thr Thr Gly Gly Arg Ile Tyr Gly Gly
        435                 440                 445

Gln Lys Ala Lys Pro Gly Asp Phe Pro Trp Gln Val Leu Ile Leu Gly
    450                 455                 460
```

```
Gly Thr Thr Ala Ala Gly Ala Leu Leu Tyr Asp Asn Trp Val Leu Thr
465                 470                 475                 480

Ala Ala His Ala Val Tyr Glu Gln Lys His Asp Ala Ser Ala Leu Asp
                485                 490                 495

Ile Arg Met Gly Thr Leu Lys Arg Leu Ser Pro His Tyr Thr Gln Ala
            500                 505                 510

Trp Ser Glu Ala Val Phe Ile His Glu Gly Tyr Thr His Asp Ala Gly
        515                 520                 525

Phe Asp Asn Asp Ile Ala Leu Ile Lys Leu Asn Asn Lys Val Val Ile
    530                 535                 540

Asn Ser Asn Ile Thr Pro Ile Cys Leu Pro Arg Lys Glu Ala Glu Ser
545                 550                 555                 560

Phe Met Arg Thr Asp Asp Ile Gly Thr Ala Ser Gly Trp Gly Leu Thr
                565                 570                 575

Gln Arg Gly Phe Leu Ala Arg Asn Leu Met Tyr Val Asp Ile Pro Ile
            580                 585                 590

Val Asp His Gln Lys Cys Thr Ala Ala Tyr Glu Lys Pro Pro Tyr Pro
        595                 600                 605

Arg Gly Ser Val Thr Ala Asn Met Leu Cys Ala Gly Leu Glu Ser Gly
    610                 615                 620

Gly Lys Asp Ser Cys Arg Gly Asp Ser Gly Gly Ala Leu Val Phe Leu
625                 630                 635                 640

Asp Ser Glu Thr Glu Arg Trp Phe Val Gly Gly Ile Val Ser Trp Gly
                645                 650                 655

Ser Met Asn Cys Gly Glu Ala Gly Gln Tyr Gly Val Tyr Thr Lys Val
            660                 665                 670

Ile Asn Tyr Ile Pro Trp Ile Glu Asn Ile Ile Ser Asp Phe
        675                 680                 685
```

<210> 12
<211> 185
<212> PRT
<213> Homo sapiens

<400> 12

```
Met Arg Leu Leu Thr Leu Leu Gly Leu Leu Cys Gly Ser Val Ala Thr
1               5                  10                  15

Pro Leu Gly Pro Lys Trp Pro Glu Pro Val Phe Gly Arg Leu Ala Ser
            20                  25                  30

Pro Gly Phe Pro Gly Glu Tyr Ala Asn Asp Gln Glu Arg Arg Trp Thr
        35                  40                  45

Leu Thr Ala Pro Pro Gly Tyr Arg Leu Arg Leu Tyr Phe Thr His Phe
    50                  55                  60

Asp Leu Glu Leu Ser His Leu Cys Glu Tyr Asp Phe Val Lys Leu Ser
65                  70                  75                  80

Ser Gly Ala Lys Val Leu Ala Thr Leu Cys Gly Gln Glu Ser Thr Asp
                85                  90                  95

Thr Glu Arg Ala Pro Gly Lys Asp Thr Phe Tyr Ser Leu Gly Ser Ser
            100                 105                 110

Leu Asp Ile Thr Phe Arg Ser Asp Tyr Ser Asn Glu Lys Pro Phe Thr
        115                 120                 125

Gly Phe Glu Ala Phe Tyr Ala Ala Glu Asp Ile Asp Glu Cys Gln Val
    130                 135                 140

Ala Pro Gly Glu Ala Pro Thr Cys Asp His His Cys His Asn His Leu
145                 150                 155                 160

Gly Gly Phe Tyr Cys Ser Cys Arg Ala Gly Tyr Val Leu His Arg Asn
                165                 170                 175

Lys Arg Thr Cys Ser Glu Gln Ser Leu
            180                 185
```

<210> 13
<211> 728
<212> PRT

<213> Homo sapiens

<400> 13

```
Met Arg Trp Leu Leu Leu Tyr Tyr Ala Leu Cys Phe Ser Leu Ser Lys
1               5                  10                  15

Ala Ser Ala His Thr Val Glu Leu Asn Asn Met Phe Gly Gln Ile Gln
            20                  25                  30

Ser Pro Gly Tyr Pro Asp Ser Tyr Pro Ser Asp Ser Glu Val Thr Trp
        35                  40                  45

Asn Ile Thr Val Pro Asp Gly Phe Arg Ile Lys Leu Tyr Phe Met His
    50                  55                  60

Phe Asn Leu Glu Ser Ser Tyr Leu Cys Glu Tyr Asp Tyr Val Lys Val
65                  70                  75                  80

Glu Thr Glu Asp Gln Val Leu Ala Thr Phe Cys Gly Arg Glu Thr Thr
                85                  90                  95

Asp Thr Glu Gln Thr Pro Gly Gln Glu Val Val Leu Ser Pro Gly Ser
            100                 105                 110

Phe Met Ser Ile Thr Phe Arg Ser Asp Phe Ser Asn Glu Glu Arg Phe
        115                 120                 125

Thr Gly Phe Asp Ala His Tyr Met Ala Val Asp Val Asp Glu Cys Lys
    130                 135                 140

Glu Arg Glu Asp Glu Glu Leu Ser Cys Asp His Tyr Cys His Asn Tyr
145                 150                 155                 160

Ile Gly Gly Tyr Tyr Cys Ser Cys Arg Phe Gly Tyr Ile Leu His Thr
                165                 170                 175

Asp Asn Arg Thr Cys Arg Val Glu Cys Ser Asp Asn Leu Phe Thr Gln
            180                 185                 190

Arg Thr Gly Val Ile Thr Ser Pro Asp Phe Pro Asn Pro Tyr Pro Lys
        195                 200                 205

Ser Ser Glu Cys Leu Tyr Thr Ile Glu Leu Glu Glu Gly Phe Met Val
    210                 215                 220
```

```
Asn Leu Gln Phe Glu Asp Ile Phe Asp Ile Glu Asp His Pro Glu Val
225                 230                 235                 240

Pro Cys Pro Tyr Asp Tyr Ile Lys Ile Lys Val Gly Pro Lys Val Leu
                245                 250                 255

Gly Pro Phe Cys Gly Glu Lys Ala Pro Glu Pro Ile Ser Thr Gln Ser
            260                 265                 270

His Ser Val Leu Ile Leu Phe His Ser Asp Asn Ser Gly Glu Asn Arg
        275                 280                 285

Gly Trp Arg Leu Ser Tyr Arg Ala Ala Gly Asn Glu Cys Pro Glu Leu
    290                 295                 300

Gln Pro Pro Val His Gly Lys Ile Glu Pro Ser Gln Ala Lys Tyr Phe
305                 310                 315                 320

Phe Lys Asp Gln Val Leu Val Ser Cys Asp Thr Gly Tyr Lys Val Leu
                325                 330                 335

Lys Asp Asn Val Glu Met Asp Thr Phe Gln Ile Glu Cys Leu Lys Asp
            340                 345                 350

Gly Thr Trp Ser Asn Lys Ile Pro Thr Cys Lys Ile Val Asp Cys Arg
        355                 360                 365

Ala Pro Gly Glu Leu Glu His Gly Leu Ile Thr Phe Ser Thr Arg Asn
    370                 375                 380

Asn Leu Thr Thr Tyr Lys Ser Glu Ile Lys Tyr Ser Cys Gln Glu Pro
385                 390                 395                 400

Tyr Tyr Lys Met Leu Asn Asn Asn Thr Gly Ile Tyr Thr Cys Ser Ala
                405                 410                 415

Gln Gly Val Trp Met Asn Lys Val Leu Gly Arg Ser Leu Pro Thr Cys
            420                 425                 430

Leu Pro Glu Cys Gly Gln Pro Ser Arg Ser Leu Pro Ser Leu Val Lys
        435                 440                 445
```

```
Arg Ile Ile Gly Gly Arg Asn Ala Glu Pro Gly Leu Phe Pro Trp Gln
    450                 455                 460

Ala Leu Ile Val Val Glu Asp Thr Ser Arg Val Pro Asn Asp Lys Trp
465                 470                 475                 480

Phe Gly Ser Gly Ala Leu Leu Ser Ala Ser Trp Ile Leu Thr Ala Ala
                485                 490                 495

His Val Leu Arg Ser Gln Arg Arg Asp Thr Thr Val Ile Pro Val Ser
            500                 505                 510

Lys Glu His Val Thr Val Tyr Leu Gly Leu His Asp Val Arg Asp Lys
        515                 520                 525

Ser Gly Ala Val Asn Ser Ser Ala Ala Arg Val Val Leu His Pro Asp
    530                 535                 540

Phe Asn Ile Gln Asn Tyr Asn His Asp Ile Ala Leu Val Gln Leu Gln
545                 550                 555                 560

Glu Pro Val Pro Leu Gly Pro His Val Met Pro Val Cys Leu Pro Arg
                565                 570                 575

Leu Glu Pro Glu Gly Pro Ala Pro His Met Leu Gly Leu Val Ala Gly
            580                 585                 590

Trp Gly Ile Ser Asn Pro Asn Val Thr Val Asp Glu Ile Ile Ser Ser
        595                 600                 605

Gly Thr Arg Thr Leu Ser Asp Val Leu Gln Tyr Val Lys Leu Pro Val
    610                 615                 620

Val Pro His Ala Glu Cys Lys Thr Ser Tyr Glu Ser Arg Ser Gly Asn
625                 630                 635                 640

Tyr Ser Val Thr Glu Asn Met Phe Cys Ala Gly Tyr Tyr Glu Gly Gly
                645                 650                 655

Lys Asp Thr Cys Leu Gly Asp Ser Gly Gly Ala Phe Val Ile Phe Asp
            660                 665                 670

Asp Leu Ser Gln Arg Trp Val Val Gln Gly Leu Val Ser Trp Gly Gly
        675                 680                 685
```

```
Pro Glu Glu Cys Gly Ser Lys Gln Val Tyr Gly Val Tyr Thr Lys Val
    690                 695                 700

Ser Asn Tyr Val Asp Trp Val Trp Glu Gln Met Gly Leu Pro Gln Ser
705                 710                 715                 720

Val Val Glu Pro Gln Val Glu Arg
                725
```

<210> 14
<211> 699
<212> PRT
<213> Homo sapiens

<400> 14

```
Met Arg Trp Leu Leu Leu Tyr Tyr Ala Leu Cys Phe Ser Leu Ser Lys
1               5                   10                  15

Ala Ser Ala His Thr Val Glu Leu Asn Asn Met Phe Gly Gln Ile Gln
            20                  25                  30

Ser Pro Gly Tyr Pro Asp Ser Tyr Pro Ser Asp Ser Glu Val Thr Trp
        35                  40                  45

Asn Ile Thr Val Pro Asp Gly Phe Arg Ile Lys Leu Tyr Phe Met His
    50                  55                  60

Phe Asn Leu Glu Ser Ser Tyr Leu Cys Glu Tyr Asp Tyr Val Lys Val
65                  70                  75                  80

Glu Thr Glu Asp Gln Val Leu Ala Thr Phe Cys Gly Arg Glu Thr Thr
                85                  90                  95

Asp Thr Glu Gln Thr Pro Gly Gln Glu Val Val Leu Ser Pro Gly Ser
            100                 105                 110

Phe Met Ser Ile Thr Phe Arg Ser Asp Phe Ser Asn Glu Glu Arg Phe
        115                 120                 125

Thr Gly Phe Asp Ala His Tyr Met Ala Val Asp Val Asp Glu Cys Lys
    130                 135                 140

Glu Arg Glu Asp Glu Glu Leu Ser Cys Asp His Tyr Cys His Asn Tyr
```

```
145                 150                 155                 160

Ile Gly Gly Tyr Tyr Cys Ser Cys Arg Phe Gly Tyr Ile Leu His Thr
                165                 170                 175

Asp Asn Arg Thr Cys Arg Val Glu Cys Ser Asp Asn Leu Phe Thr Gln
            180                 185                 190

Arg Thr Gly Val Ile Thr Ser Pro Asp Phe Pro Asn Pro Tyr Pro Lys
        195                 200                 205

Ser Ser Glu Cys Leu Tyr Thr Ile Glu Leu Glu Glu Gly Phe Met Val
    210                 215                 220

Asn Leu Gln Phe Glu Asp Ile Phe Asp Ile Glu Asp His Pro Glu Val
225                 230                 235                 240

Pro Cys Pro Tyr Asp Tyr Ile Lys Ile Lys Val Gly Pro Lys Val Leu
                245                 250                 255

Gly Pro Phe Cys Gly Glu Lys Ala Pro Glu Pro Ile Ser Thr Gln Ser
            260                 265                 270

His Ser Val Leu Ile Leu Phe His Ser Asp Asn Ser Gly Glu Asn Arg
        275                 280                 285

Gly Trp Arg Leu Ser Tyr Arg Ala Ala Gly Asn Glu Cys Pro Glu Leu
    290                 295                 300

Gln Pro Pro Val His Gly Lys Ile Glu Pro Ser Gln Ala Lys Tyr Phe
305                 310                 315                 320

Phe Lys Asp Gln Val Leu Val Ser Cys Asp Thr Gly Tyr Lys Val Leu
                325                 330                 335

Lys Asp Asn Val Glu Met Asp Thr Phe Gln Ile Glu Cys Leu Lys Asp
            340                 345                 350

Gly Thr Trp Ser Asn Lys Ile Pro Thr Cys Lys Ile Val Asp Cys Arg
        355                 360                 365

Ala Pro Gly Glu Leu Glu His Gly Leu Ile Thr Phe Ser Thr Arg Asn
    370                 375                 380
```

```
Asn Leu Thr Thr Tyr Lys Ser Glu Ile Lys Tyr Ser Cys Gln Glu Pro
385                 390                 395                 400

Tyr Tyr Lys Met Leu Asn Asn Asn Thr Gly Ile Tyr Thr Cys Ser Ala
                405                 410                 415

Gln Gly Val Trp Met Asn Lys Val Leu Gly Arg Ser Leu Pro Thr Cys
            420                 425                 430

Leu Pro Val Cys Gly Leu Pro Lys Phe Ser Arg Lys Leu Met Ala Arg
        435                 440                 445

Ile Phe Asn Gly Arg Pro Ala Gln Lys Gly Thr Thr Pro Trp Ile Ala
    450                 455                 460

Met Leu Ser His Leu Asn Gly Gln Pro Phe Cys Gly Gly Ser Leu Leu
465                 470                 475                 480

Gly Ser Ser Trp Ile Val Thr Ala Ala His Cys Leu His Gln Ser Leu
                485                 490                 495

Asp Pro Glu Asp Pro Thr Leu Arg Asp Ser Asp Leu Leu Ser Pro Ser
            500                 505                 510

Asp Phe Lys Ile Ile Leu Gly Lys His Trp Arg Leu Arg Ser Asp Glu
        515                 520                 525

Asn Glu Gln His Leu Gly Val Lys His Thr Thr Leu His Pro Gln Tyr
    530                 535                 540

Asp Pro Asn Thr Phe Glu Asn Asp Val Ala Leu Val Glu Leu Leu Glu
545                 550                 555                 560

Ser Pro Val Leu Asn Ala Phe Val Met Pro Ile Cys Leu Pro Glu Gly
                565                 570                 575

Pro Gln Gln Glu Gly Ala Met Val Ile Val Ser Gly Trp Gly Lys Gln
            580                 585                 590

Phe Leu Gln Arg Phe Pro Glu Thr Leu Met Glu Ile Glu Ile Pro Ile
        595                 600                 605

Val Asp His Ser Thr Cys Gln Lys Ala Tyr Ala Pro Leu Lys Lys Lys
```

610 615 620

Val Thr Arg Asp Met Ile Cys Ala Gly Glu Lys Glu Gly Gly Lys Asp
625 630 635 640

Ala Cys Ala Gly Asp Ser Gly Gly Pro Met Val Thr Leu Asn Arg Glu
645 650 655

Arg Gly Gln Trp Tyr Leu Val Gly Thr Val Ser Trp Gly Asp Asp Cys
660 665 670

Gly Lys Lys Asp Arg Tyr Gly Val Tyr Ser Tyr Ile His His Asn Lys
675 680 685

Asp Trp Ile Gln Arg Val Thr Gly Val Arg Asn
690 695

<210> 15
<211> 239
<212> PRT
<213> Mus musculus

<220>
<221> MISC_FEATURE
<222> (91)..(116)
<223> Unknown

<400> 15

Met Leu Leu Leu Pro Leu Leu Pro Val Leu Leu Cys Val Val Ser Val
1 5 10 15

Ser Ser Ser Gly Ser Gln Thr Cys Glu Asp Thr Leu Lys Thr Cys Ser
20 25 30

Val Ile Ala Cys Gly Arg Asp Gly Arg Asp Gly Pro Lys Gly Glu Lys
35 40 45

Gly Glu Pro Gly Gln Gly Leu Arg Gly Leu Gln Gly Pro Pro Gly Lys
50 55 60

Leu Gly Pro Pro Gly Ser Val Gly Ser Pro Gly Ser Pro Gly Pro Lys
65 70 75 80

Gly Gln Lys Gly Asp His Gly Asp Asn Arg Xaa Xaa Xaa Xaa Xaa Xaa
85 90 95

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
100 105 110

Xaa Xaa Xaa Xaa His Ala Phe Ser Met Gly Lys Lys Ser Gly Lys Lys
115 120 125

Leu Phe Val Thr Asn His Glu Lys Met Pro Phe Ser Lys Val Lys Ser
130 135 140

Leu Cys Thr Glu Leu Gln Gly Thr Val Ala Ile Pro Arg Asn Ala Glu
145 150 155 160

Glu Asn Lys Ala Ile Gln Glu Val Ala Thr Gly Ile Ala Phe Leu Gly
165 170 175

Ile Thr Asp Glu Ala Thr Glu Gly Gln Phe Met Tyr Val Thr Gly Gly
180 185 190

Arg Leu Thr Tyr Ser Asn Trp Lys Lys Asp Glu Pro Asn Asn His Gly
195 200 205

Ser Gly Glu Asp Cys Val Ile Ile Leu Asp Asn Gly Leu Trp Asn Asp
210 215 220

Ile Ser Cys Gln Ala Ser Phe Lys Ala Val Cys Glu Phe Pro Ala
225 230 235

<210> 16
<211> 185
<212> PRT
<213> Oncorhynchus mykiss

<400> 16

Met Glu Lys Leu Ala Ile Leu Leu Leu Leu Ser Ala Ser Ile Ala Leu
1 5 10 15

Gly Asp Ala Asn Leu Thr Gln Leu Leu Gly Leu Glu Pro Leu Leu Lys
20 25 30

Thr Lys Val Glu Gln Thr Thr Pro Glu Ala Gln Val Glu Ala Val Gln
35 40 45

Glu Gly Ile Lys Glu Gly Ser Cys Pro Ser Asp Trp Tyr Thr Tyr Gly

```
    50                  55                  60

Ser His Cys Phe Lys Phe Val Ser Ile Gln Gln Ser Phe Val Asp Ser
65                  70                  75                  80

Glu Gln Asn Cys Leu Ala Leu Gly Gly Asn Leu Ala Ser Val His Ser
                85                  90                  95

Leu Leu Glu Tyr Gln Phe Met Gln Ala Leu Thr Lys Asp Ala Asn Gly
            100                 105                 110

His Leu His Ser Thr Trp Leu Gly Gly Phe Asp Ala Ile Lys Glu Gly
        115                 120                 125

Thr Trp Met Trp Ser Asp Gly Ser Arg Phe Asp Tyr Thr Asn Trp Asp
    130                 135                 140

Thr Asp Glu Pro Asn Asn Ala Gly Glu Gly Glu Asp Cys Leu His Met
145                 150                 155                 160

Asn Ala Ala Ser Ala Lys Leu Trp Phe Asp Val Pro Cys Glu Trp Lys
                165                 170                 175

Phe Ala Ser Leu Cys Ser Arg Arg Met
            180                 185


<210>  17
<211>  240
<212>  PRT
<213>  Sus scrofa

<400>  17

Met Ser Leu Phe Pro Ser Leu His Leu Leu Leu Leu Ile Val Met Thr
1               5                   10                  15

Ala Ser His Thr Glu Thr Glu Asn Cys Glu Asp Ile Gln Asn Thr Cys
            20                  25                  30

Leu Val Ile Ser Cys Asp Ser Pro Gly Ile Asn Gly Leu Pro Gly Lys
        35                  40                  45

Asp Gly Leu Asp Gly Ala Lys Gly Glu Lys Gly Glu Pro Gly Gln Gly
    50                  55                  60
```

```
Leu Ile Gly Leu Gln Gly Leu Pro Gly Met Val Gly Pro Gln Gly Ser
65                  70                  75                  80

Pro Gly Ile Pro Gly Leu Pro Gly Leu Lys Gly Gln Lys Gly Asp Ser
                85                  90                  95

Gly Ile Asp Pro Gly Asn Ser Leu Ala Asn Leu Arg Ser Glu Leu Asp
            100                 105                 110

Asn Ile Lys Lys Trp Leu Ile Phe Ala Gln Gly Lys Gln Val Gly Lys
        115                 120                 125

Lys Leu Tyr Leu Thr Asn Gly Lys Lys Met Ser Phe Asn Gly Val Lys
    130                 135                 140

Ala Leu Cys Ala Gln Phe Gln Ala Ser Val Ala Thr Pro Thr Asn Ser
145                 150                 155                 160

Arg Glu Asn Gln Ala Ile Gln Glu Leu Ala Gly Thr Glu Ala Phe Leu
                165                 170                 175

Gly Ile Thr Asp Glu Tyr Thr Glu Gly Gln Phe Val Asp Leu Thr Gly
            180                 185                 190

Lys Arg Val Arg Tyr Gln Asn Trp Asn Asp Gly Glu Pro Asn Asn Ala
        195                 200                 205

Asp Ser Ala Glu His Cys Val Glu Ile Leu Lys Asp Gly Lys Trp Asn
    210                 215                 220

Asp Ile Phe Cys Ser Ser Gln Leu Ser Ala Val Cys Glu Phe Pro Ala
225                 230                 235                 240
```

<210> 18
<211> 239
<212> PRT
<213> Mus musculus

<400> 18

```
Met Leu Leu Leu Pro Leu Leu Pro Val Leu Leu Cys Val Val Ser Val
1               5                   10                  15

Ser Ser Ser Gly Ser Gln Thr Cys Glu Asp Thr Leu Lys Thr Cys Ser
            20                  25                  30
```

```
Val Ile Ala Cys Gly Arg Asp Gly Arg Asp Gly Pro Lys Gly Glu Lys
        35                  40                  45

Gly Glu Pro Gly Gln Gly Leu Arg Gly Leu Gln Gly Pro Pro Gly Lys
    50                  55                  60

Leu Gly Pro Pro Gly Ser Val Gly Ser Pro Gly Ser Pro Gly Pro Lys
65                  70                  75                  80

Gly Gln Lys Gly Asp His Gly Asp Asn Arg Ala Ile Glu Glu Lys Leu
                85                  90                  95

Ala Asn Met Glu Ala Glu Ile Arg Ile Leu Lys Ser Lys Leu Gln Leu
            100                 105                 110

Thr Asn Lys Leu His Ala Phe Ser Met Gly Lys Lys Ser Gly Lys Lys
        115                 120                 125

Leu Phe Val Thr Asn His Glu Lys Met Pro Phe Ser Lys Val Lys Ser
    130                 135                 140

Leu Cys Thr Glu Leu Gln Gly Thr Val Ala Ile Pro Arg Asn Ala Glu
145                 150                 155                 160

Glu Asn Lys Ala Ile Gln Glu Val Ala Thr Gly Ile Ala Phe Leu Gly
                165                 170                 175

Ile Thr Asp Glu Ala Thr Glu Gly Gln Phe Met Tyr Val Thr Gly Gly
            180                 185                 190

Arg Leu Thr Tyr Ser Asn Trp Lys Lys Asp Glu Pro Asn Asn His Gly
        195                 200                 205

Ser Gly Glu Asp Cys Val Ile Ile Leu Asp Asn Gly Leu Trp Asn Asp
    210                 215                 220

Ile Ser Cys Gln Ala Ser Phe Lys Ala Val Cys Glu Phe Pro Ala
225                 230                 235
```

<210> 19
<211> 244
<212> PRT
<213> Mus musculus

<400> 19

```
Met Ser Ile Phe Thr Ser Phe Leu Leu Leu Cys Val Val Thr Val Val
1               5                  10                  15

Tyr Ala Glu Thr Leu Thr Glu Gly Val Gln Asn Ser Cys Pro Val Val
            20                  25                  30

Thr Cys Ser Ser Pro Gly Leu Asn Gly Phe Pro Gly Lys Asp Gly Arg
        35                  40                  45

Asp Gly Ala Lys Gly Glu Lys Gly Glu Pro Gly Gln Gly Leu Arg Gly
    50                  55                  60

Leu Gln Gly Pro Pro Gly Lys Val Gly Pro Thr Gly Pro Pro Gly Asn
65                  70                  75                  80

Pro Gly Leu Lys Gly Ala Val Gly Pro Lys Gly Asp Arg Gly Asp Arg
                85                  90                  95

Ala Glu Phe Asp Thr Ser Glu Ile Asp Ser Glu Ile Ala Ala Leu Arg
            100                 105                 110

Ser Glu Leu Arg Ala Leu Arg Asn Trp Val Leu Phe Ser Leu Ser Glu
        115                 120                 125

Lys Val Gly Lys Lys Tyr Phe Val Ser Ser Val Lys Lys Met Ser Leu
    130                 135                 140

Asp Arg Val Lys Ala Leu Cys Ser Glu Phe Gln Gly Ser Val Ala Thr
145                 150                 155                 160

Pro Arg Asn Ala Glu Glu Asn Ser Ala Ile Gln Lys Val Ala Lys Asp
                165                 170                 175

Ile Ala Tyr Leu Gly Ile Thr Asp Val Arg Val Glu Gly Ser Phe Glu
            180                 185                 190

Asp Leu Thr Gly Asn Arg Val Arg Tyr Thr Asn Trp Asn Asp Gly Glu
        195                 200                 205

Pro Asn Asn Thr Gly Asp Gly Glu Asp Cys Val Val Ile Leu Gly Asn
    210                 215                 220
```

```
Gly Lys Trp Asn Asp Val Pro Cys Ser Asp Ser Phe Leu Ala Ile Cys
225                 230                 235                 240


Glu Phe Ser Asp
```

<210> 20
<211> 381
<212> PRT
<213> Macaca nemestrina

<400> 20

```
Met Ser Asp Ser Lys Glu Pro Arg Leu Gln Gln Leu Asp Leu Leu Glu
1               5                   10                  15


Glu Glu Gln Leu Gly Gly Val Gly Phe Arg Gln Thr Arg Gly Tyr Lys
            20                  25                  30


Ser Leu Ala Gly Cys Leu Gly His Gly Pro Leu Val Leu Gln Leu Leu
        35                  40                  45


Ser Phe Thr Leu Leu Ala Gly Leu Leu Val Gln Val Ser Lys Val Pro
    50                  55                  60


Ser Ser Leu Ser Gln Gly Gln Ser Lys Gln Asp Ala Ile Tyr Gln Asn
65                  70                  75                  80


Leu Thr Gln Leu Lys Val Ala Val Ser Glu Leu Ser Glu Lys Ser Lys
                85                  90                  95


Gln Gln Glu Ile Tyr Gln Glu Leu Thr Arg Leu Lys Ala Ala Val Gly
            100                 105                 110


Glu Leu Pro Glu Lys Ser Lys Gln Gln Glu Ile Tyr Glu Glu Leu Thr
        115                 120                 125


Arg Leu Arg Ala Ala Val Gly Glu Leu Pro Glu Lys Ser Lys Leu Gln
    130                 135                 140


Glu Ile Tyr Gln Glu Leu Thr Arg Leu Lys Ala Ala Val Gly Glu Leu
145                 150                 155                 160


Pro Glu Lys Ser Lys Gln Gln Glu Ile Tyr Gln Glu Leu Ser Arg Leu
                165                 170                 175
```

```
Lys Ala Ala Val Gly Asp Leu Pro Glu Lys Ser Lys Gln Gln Glu Ile
            180                 185                 190

Tyr Gln Lys Leu Thr Gln Leu Lys Ala Ala Val Asp Gly Leu Pro Asp
        195                 200                 205

Arg Ser Lys Gln Gln Glu Ile Tyr Gln Glu Leu Ile Gln Leu Lys Ala
    210                 215                 220

Ala Val Glu Arg Leu Cys His Pro Cys Pro Trp Glu Trp Thr Phe Phe
225                 230                 235                 240

Gln Gly Asn Cys Tyr Phe Met Ser Asn Ser Gln Arg Asn Trp His Asp
                245                 250                 255

Ser Ile Thr Ala Cys Gln Glu Val Gly Ala Gln Leu Val Val Ile Lys
            260                 265                 270

Ser Ala Glu Glu Gln Asn Phe Leu Gln Leu Gln Ser Ser Arg Ser Asn
        275                 280                 285

Arg Phe Thr Trp Met Gly Leu Ser Asp Leu Asn His Glu Gly Thr Trp
    290                 295                 300

Gln Trp Val Asp Gly Ser Pro Leu Leu Pro Ser Phe Lys Gln Tyr Trp
305                 310                 315                 320

Asn Lys Gly Glu Pro Asn Asn Val Gly Glu Glu Asp Cys Ala Glu Phe
                325                 330                 335

Ser Gly Asn Gly Trp Asn Asp Asp Lys Cys Asn Leu Ala Lys Phe Trp
            340                 345                 350

Ile Cys Lys Lys Ser Ala Ala Ser Cys Ser Gly Asp Glu Glu Arg Leu
        355                 360                 365

Leu Ser Pro Ala Pro Thr Thr Pro Asn Pro Pro Pro Ala
    370                 375                 380
```

<210> 21
<211> 246
<212> PRT
<213> Carassius auratus

<400> 21

```
Leu Leu Leu Leu Gln Phe Ala Leu Gln Leu Leu Asp Gly Ala Glu Pro
1               5                  10                  15

Gln Asn Leu Asn Cys Pro Ala Tyr Gly Gly Val Pro Gly Thr Pro Gly
            20                  25                  30

His Asn Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly Lys Asp Gly Ala
        35                  40                  45

Ile Gly Pro Lys Gly Glu Lys Gly Glu Ser Gly Val Ser Val Gln Gly
    50                  55                  60

Pro Pro Gly Lys Ala Gly Pro Pro Gly Thr Ala Gly Glu Lys Gly Glu
65                  70                  75                  80

Arg Gly Pro Ser Gly Pro Gln Gly Ser Pro Gly Ser Glu Ser Val Leu
                85                  90                  95

Glu Ser Leu Lys Ser Glu Ile Gln Gln Leu Lys Ala Lys Ile Ala Thr
            100                 105                 110

Phe Glu Lys Val Ser Ser Val Cys His Phe Arg Lys Val Gly Gln Lys
        115                 120                 125

Tyr Tyr Ile Thr Asp Gly Val Val Gly Asn Phe Asp Gln Gly Leu Lys
    130                 135                 140

Ser Cys Met Glu Phe Gly Gly Thr Met Val Ser Pro Arg Thr Ser Ala
145                 150                 155                 160

Glu Asn Gln Ala Leu Leu Lys Leu Val Val Ser Ser Gly Leu Gly Ser
                165                 170                 175

Lys Lys Pro Tyr Ile Gly Val Thr Asp Arg Lys Thr Glu Gly Gln Phe
            180                 185                 190

Val Asp Thr Glu Gly Lys Gln Leu Thr Phe Thr Asn Trp Gly Pro Gly
        195                 200                 205

Gln Pro Asp Asp Tyr Lys Gly Leu Gln Asp Cys Gly Val Ile Glu Asp
    210                 215                 220
```

```
Thr Gly Leu Trp Asp Asp Gly Gly Cys Gly Asp Ile Arg Pro Ile Met
225                 230                 235                 240


Cys Glu Ile Asp Ile Lys
                245
```

<210> 22
<211> 251
<212> PRT
<213> Danio rerio

<400> 22

```
Met Ala Leu Leu Lys Leu Phe Leu Gly Ala Leu Leu Leu Leu Gln Leu
1               5                   10                  15


Val Leu Gln Leu Met Ala Gly Ala Ala Asp Pro Gln Ser Leu Asn Cys
            20                  25                  30


Pro Ala Tyr Ala Gly Val Pro Gly Thr Pro Gly His Asn Gly Leu Pro
        35                  40                  45


Gly Arg Asp Gly Arg Val Gly Arg Asp Gly Ala Asn Gly Pro Lys Gly
    50                  55                  60


Glu Lys Gly Glu Pro Gly Val Asn Val Gln Gly Pro Pro Gly Lys Ala
65                  70                  75                  80


Gly Pro Pro Gly Pro Ala Gly Ala Lys Gly Glu Arg Gly Pro Ser Gly
                85                  90                  95


Leu Pro Gly Gln Asp Cys Met Ser Asp Ser Leu Lys Ser Glu Leu Gln
            100                 105                 110


Lys Leu Ser Asp Lys Ile Ala Leu Ile Glu Lys Val Val Asn Phe Lys
        115                 120                 125


Thr Phe Lys Lys Val Gly Gln Lys Tyr Tyr Val Thr Asp Asp Val Glu
    130                 135                 140


Glu Thr Phe Asp Lys Gly Met Gln Tyr Cys Ser Ser Asn Gly Gly Ala
145                 150                 155                 160


Leu Val Leu Pro Arg Thr Leu Glu Glu Asn Ala Leu Leu Lys Val Phe
                165                 170                 175
```

```
Val Ser Ser Ala Phe Lys Arg Leu Phe Ile Arg Ile Thr Asp Arg Glu
            180                 185                 190

Lys Glu Gly Glu Phe Val Asp Thr Asp Arg Lys Lys Leu Thr Phe Thr
        195                 200                 205

Asn Trp Gly Pro Asn Gln Pro Asp Asn Tyr Lys Gly Ala Gln Asp Cys
    210                 215                 220

Gly Ala Ile Ala Asp Ser Gly Leu Trp Asp Asp Val Ser Cys Asp Ser
225                 230                 235                 240

Leu Tyr Pro Ile Ile Cys Glu Ile Glu Ile Lys
                245                 250
```

<210> 23
<211> 256
<212> PRT
<213> Cyprinus carpio

<400> 23

```
Met Ala Leu Phe Lys Leu Phe Leu Gly Thr Leu Leu Leu Leu Gln Phe
1               5                   10                  15

Ala Leu Gln Leu Leu Asp Gly Ala Glu Pro Gln Asn Leu Asn Cys Pro
            20                  25                  30

Ala Tyr Gly Gly Val Pro Gly Thr Pro Gly His Asn Gly Leu Pro Gly
        35                  40                  45

Arg Asp Gly Arg Asp Gly Lys Asp Gly Ala Ile Gly Pro Lys Gly Glu
    50                  55                  60

Lys Gly Glu Ser Gly Val Ser Val Gln Gly Pro Pro Gly Lys Ala Gly
65                  70                  75                  80

Pro Pro Gly Pro Ala Gly Glu Lys Gly Glu Arg Gly Pro Thr Gly Ser
                85                  90                  95

Gln Gly Ser Pro Gly Ser Glu Ser Val Leu Glu Ser Leu Lys Ser Glu
            100                 105                 110

Ile Gln Gln Leu Lys Ala Lys Ile Ala Thr Phe Glu Lys Val Ala Ser
        115                 120                 125
```

```
Val Gly His Phe Arg Gln Val Gly Gln Lys Tyr Tyr Ile Thr Asp Gly
    130                 135                 140

Val Val Gly Thr Phe Asp Gln Gly Leu Lys Phe Cys Lys Asp Phe Gly
145                 150                 155                 160

Gly Thr Met Val Phe Pro Arg Thr Ser Ala Glu Asn Gln Ala Leu Leu
                165                 170                 175

Lys Leu Val Val Ser Ser Gly Leu Ser Ser Lys Lys Pro Tyr Ile Gly
            180                 185                 190

Val Thr Asp Arg Glu Thr Glu Gly Arg Phe Val Asn Thr Glu Gly Lys
        195                 200                 205

Gln Leu Thr Phe Thr Asn Trp Gly Pro Gly Gln Pro Asp Asp Tyr Lys
    210                 215                 220

Gly Leu Gln Asp Cys Gly Val Ile Glu Asp Ser Gly Leu Trp Asp Asp
225                 230                 235                 240

Gly Ser Cys Gly Asp Ile Arg Pro Ile Met Cys Glu Ile Asp Asn Lys
                245                 250                 255
```

<210> 24
<211> 31
<212> PRT
<213> Sus scrofa

<400> 24

```
Thr Lys Gly Glu Lys Gly Glu Pro Gly Pro Gly Phe Arg Gly Ser Gln
1               5                   10                  15

Gly Pro Pro Gly Lys Met Gly Pro Pro Gly Asn Ile Gly Glu Thr
            20                  25                  30
```

<210> 25
<211> 254
<212> PRT
<213> Gallus gallus

<400> 25

```
Met Thr Leu Leu Gln Pro Phe Ser Ala Leu Leu Leu Cys Leu Ser Leu
1               5                   10                  15
```

Met Met Ala Thr Ser Leu Leu Thr Thr Asp Lys Pro Glu Glu Lys Met
20 25 30

Tyr Ser Cys Pro Ile Ile Gln Cys Ser Ala Pro Ala Val Asn Gly Leu
35 40 45

Pro Gly Arg Asp Gly Arg Asp Gly Pro Lys Gly Glu Lys Gly Asp Pro
50 55 60

Gly Glu Gly Leu Arg Gly Leu Gln Gly Leu Pro Gly Lys Ala Gly Pro
65 70 75 80

Gln Gly Leu Lys Gly Glu Val Gly Pro Gln Gly Glu Lys Gly Gln Lys
85 90 95

Gly Glu Arg Gly Ile Val Val Thr Asp Asp Leu His Arg Gln Ile Thr
100 105 110

Asp Leu Glu Ala Lys Ile Arg Val Leu Glu Asp Asp Leu Ser Arg Tyr
115 120 125

Lys Lys Ala Leu Ser Leu Lys Asp Val Val Asn Val Gly Lys Lys Met
130 135 140

Phe Val Ser Thr Gly Lys Lys Tyr Asn Phe Glu Lys Gly Lys Ser Leu
145 150 155 160

Cys Ala Lys Ala Gly Ser Val Leu Ala Ser Pro Arg Asn Glu Ala Glu
165 170 175

Asn Thr Ala Leu Lys Asp Leu Ile Asp Pro Ser Ser Gln Ala Tyr Ile
180 185 190

Gly Ile Ser Asp Ala Gln Thr Glu Gly Arg Phe Met Tyr Leu Ser Gly
195 200 205

Gly Pro Leu Thr Tyr Ser Asn Trp Lys Pro Gly Glu Pro Asn Asn His
210 215 220

Lys Asn Glu Asp Cys Ala Val Ile Glu Asp Ser Gly Lys Trp Asn Asp
225 230 235 240

```
Leu Asp Cys Ser Asn Ser Asn Ile Phe Ile Ile Cys Glu Leu
                245                 250
```

<210> 26
<211> 244
<212> PRT
<213> Mus musculus

<400> 26

```
Met Ser Ile Phe Thr Ser Phe Leu Leu Leu Cys Val Val Thr Val Val
1               5                   10                  15

Tyr Ala Glu Thr Leu Thr Glu Gly Val Gln Asn Ser Cys Pro Val Val
            20                  25                  30

Thr Cys Ser Ser Pro Gly Leu Asn Gly Phe Pro Gly Lys Asp Gly Arg
        35                  40                  45

Asp Gly Ala Lys Gly Glu Lys Gly Glu Pro Gly Gln Gly Leu Arg Gly
    50                  55                  60

Leu Gln Gly Pro Pro Gly Lys Val Gly Pro Thr Gly Pro Pro Gly Asn
65                  70                  75                  80

Pro Gly Leu Lys Gly Ala Val Gly Pro Lys Gly Asp Arg Gly Asp Arg
                85                  90                  95

Ala Glu Phe Asp Thr Ser Glu Ile Asp Ser Glu Ile Ala Ala Leu Arg
            100                 105                 110

Ser Glu Leu Arg Ala Leu Arg Asn Trp Val Leu Phe Ser Leu Ser Glu
        115                 120                 125

Lys Val Gly Lys Lys Tyr Phe Val Ser Ser Val Lys Lys Met Ser Leu
    130                 135                 140

Asp Arg Val Lys Ala Leu Cys Ser Glu Phe Gln Gly Ser Val Ala Thr
145                 150                 155                 160

Pro Arg Asn Ala Glu Glu Asn Ser Ala Ile Gln Lys Val Ala Lys Asp
                165                 170                 175

Ile Ala Tyr Leu Gly Ile Thr Asp Val Arg Val Glu Gly Ser Phe Glu
            180                 185                 190
```

```
Asp Leu Thr Gly Asn Arg Val Arg Tyr Thr Asn Trp Asn Asp Gly Glu
        195                 200                 205

Pro Asn Asn Thr Gly Asp Gly Glu Asp Cys Val Val Ile Leu Gly Asn
    210                 215                 220

Gly Lys Trp Asn Asp Val Pro Cys Ser Asp Ser Phe Leu Ala Ile Cys
225                 230                 235                 240

Glu Phe Ser Asp
```

<210> 27
<211> 239
<212> PRT
<213> Mus musculus

<400> 27

```
Met Leu Leu Leu Pro Leu Leu Pro Val Leu Leu Cys Val Val Ser Val
1               5                   10                  15

Ser Ser Ser Gly Ser Gln Thr Cys Glu Asp Thr Leu Lys Thr Cys Ser
            20                  25                  30

Val Ile Ala Cys Gly Arg Asp Gly Arg Asp Gly Pro Lys Gly Glu Lys
        35                  40                  45

Gly Glu Pro Gly Gln Gly Leu Arg Gly Leu Gln Gly Pro Pro Gly Lys
    50                  55                  60

Leu Gly Pro Pro Gly Ser Val Gly Ser Pro Gly Ser Pro Gly Pro Lys
65                  70                  75                  80

Gly Gln Lys Gly Asp His Gly Asp Asn Arg Ala Ile Glu Glu Lys Leu
                85                  90                  95

Ala Asn Met Glu Ala Glu Ile Arg Ile Leu Lys Ser Lys Leu Gln Leu
            100                 105                 110

Thr Asn Lys Leu His Ala Phe Ser Met Gly Lys Lys Ser Gly Lys Lys
        115                 120                 125

Leu Phe Val Thr Asn His Glu Lys Met Pro Phe Ser Lys Val Lys Ser
    130                 135                 140
```

```
Leu Cys Thr Glu Leu Gln Gly Thr Val Ala Ile Pro Arg Asn Ala Glu
145                 150                 155                 160

Glu Asn Lys Ala Ile Gln Glu Val Ala Thr Gly Ile Ala Phe Leu Gly
                165                 170                 175

Ile Thr Asp Glu Ala Thr Glu Gly Gln Phe Met Tyr Val Thr Gly Gly
            180                 185                 190

Arg Leu Thr Tyr Ser Asn Trp Lys Lys Asp Glu Pro Asn Asn His Gly
        195                 200                 205

Ser Gly Glu Asp Cys Val Ile Ile Leu Asp Asn Gly Leu Trp Asn Asp
    210                 215                 220

Ile Ser Cys Gln Ala Ser Phe Lys Ala Val Cys Glu Phe Pro Ala
225                 230                 235
```

<210> 28
<211> 238
<212> PRT
<213> Rattus norvegicus

<400> 28

```
Met Leu Leu Leu Pro Leu Leu Val Leu Leu Cys Val Val Ser Val Ser
1               5                   10                  15

Ser Ser Gly Ser Gln Thr Cys Glu Glu Thr Leu Lys Thr Cys Ser Val
            20                  25                  30

Ile Ala Cys Gly Arg Asp Gly Arg Asp Gly Pro Lys Gly Glu Lys Gly
        35                  40                  45

Glu Pro Gly Gln Gly Leu Arg Gly Leu Gln Gly Pro Pro Gly Lys Leu
    50                  55                  60

Gly Pro Pro Gly Ser Val Gly Ala Pro Gly Ser Gln Gly Pro Lys Gly
65                  70                  75                  80

Gln Lys Gly Asp Arg Gly Asp Ser Arg Ala Ile Glu Val Lys Leu Ala
                85                  90                  95

Asn Met Glu Ala Glu Ile Asn Thr Leu Lys Ser Lys Leu Glu Leu Thr
```

```
            100                 105                 110

Asn Lys Leu His Ala Phe Ser Met Gly Lys Lys Ser Gly Lys Lys Phe
        115                 120                 125

Phe Val Thr Asn His Glu Arg Met Pro Phe Ser Lys Val Lys Ala Leu
    130                 135                 140

Cys Ser Glu Leu Arg Gly Thr Val Ala Ile Pro Arg Asn Ala Glu Glu
145                 150                 155                 160

Asn Lys Ala Ile Gln Glu Val Ala Lys Thr Ser Ala Phe Leu Gly Ile
                165                 170                 175

Thr Asp Glu Val Thr Glu Gly Gln Phe Met Tyr Val Thr Gly Gly Arg
            180                 185                 190

Leu Thr Tyr Ser Asn Trp Lys Lys Asp Glu Pro Asn Asp His Gly Ser
        195                 200                 205

Gly Glu Asp Cys Val Thr Ile Val Asp Asn Gly Leu Trp Asn Asp Ile
    210                 215                 220

Ser Cys Gln Ala Ser His Thr Ala Val Cys Glu Phe Pro Ala
225                 230                 235
```

<210> 29
<211> 244
<212> PRT
<213> Rattus norvegicus

<400> 29

```
Met Ser Leu Phe Thr Ser Phe Leu Leu Leu Cys Val Leu Thr Ala Val
1               5                   10                  15

Tyr Ala Glu Thr Leu Thr Glu Gly Ala Gln Ser Ser Cys Pro Val Ile
            20                  25                  30

Ala Cys Ser Ser Pro Gly Leu Asn Gly Phe Pro Gly Lys Asp Gly His
        35                  40                  45

Asp Gly Ala Lys Gly Glu Lys Gly Glu Pro Gly Gln Gly Leu Arg Gly
    50                  55                  60
```

```
Leu Gln Gly Pro Pro Gly Lys Val Gly Pro Ala Gly Pro Pro Gly Asn
65                  70                  75                  80

Pro Gly Ser Lys Gly Ala Thr Gly Pro Lys Gly Asp Arg Gly Glu Ser
                85                  90                  95

Val Glu Phe Asp Thr Thr Asn Ile Asp Leu Glu Ile Ala Ala Leu Arg
            100                 105                 110

Ser Glu Leu Arg Ala Met Arg Lys Trp Val Leu Leu Ser Met Ser Glu
        115                 120                 125

Asn Val Gly Lys Lys Tyr Phe Met Ser Ser Val Arg Arg Met Pro Leu
    130                 135                 140

Asn Arg Ala Lys Ala Leu Cys Ser Glu Leu Gln Gly Thr Val Ala Thr
145                 150                 155                 160

Pro Arg Asn Ala Glu Glu Asn Arg Ala Ile Gln Asn Val Ala Lys Asp
                165                 170                 175

Val Ala Phe Leu Gly Ile Thr Asp Gln Arg Thr Glu Asn Val Phe Glu
            180                 185                 190

Asp Leu Thr Gly Asn Arg Val Arg Tyr Thr Asn Trp Asn Glu Gly Glu
        195                 200                 205

Pro Asn Asn Val Gly Ser Gly Glu Asn Cys Val Val Leu Leu Thr Asn
    210                 215                 220

Gly Lys Trp Asn Asp Val Pro Cys Ser Asp Ser Phe Leu Val Val Cys
225                 230                 235                 240

Glu Phe Ser Asp
```

<210> 30
<211> 248
<212> PRT
<213> Homo sapiens

<400> 30

```
Met Ser Leu Phe Pro Ser Leu Pro Leu Leu Leu Leu Ser Met Val Ala
1               5                   10                  15
```

```
Ala Ser Tyr Ser Glu Thr Val Thr Cys Glu Asp Ala Gln Lys Thr Cys
            20                  25                  30

Pro Ala Val Ile Ala Cys Ser Ser Pro Gly Ile Asn Gly Phe Pro Gly
        35                  40                  45

Lys Asp Gly Arg Asp Gly Thr Lys Gly Glu Lys Gly Glu Pro Gly Gln
    50                  55                  60

Gly Leu Arg Gly Leu Gln Gly Pro Pro Gly Lys Leu Gly Pro Pro Gly
65                  70                  75                  80

Asn Pro Gly Pro Ser Gly Ser Pro Gly Pro Lys Gly Gln Lys Gly Asp
                85                  90                  95

Pro Gly Lys Ser Pro Asp Gly Asp Ser Ser Leu Ala Ala Ser Glu Arg
            100                 105                 110

Lys Ala Leu Gln Thr Glu Met Ala Arg Ile Lys Lys Trp Leu Thr Phe
        115                 120                 125

Ser Leu Gly Lys Gln Val Gly Asn Lys Phe Phe Leu Thr Asn Gly Glu
    130                 135                 140

Ile Met Thr Phe Glu Lys Val Lys Ala Leu Cys Val Lys Phe Gln Ala
145                 150                 155                 160

Ser Val Ala Thr Pro Arg Asn Ala Ala Glu Asn Gly Ala Ile Gln Asn
                165                 170                 175

Leu Ile Lys Glu Glu Ala Phe Leu Gly Ile Thr Asp Glu Lys Thr Glu
            180                 185                 190

Gly Gln Phe Val Asp Leu Thr Gly Asn Arg Leu Thr Tyr Thr Asn Trp
        195                 200                 205

Asn Glu Gly Glu Pro Asn Asn Ala Gly Ser Asp Glu Asp Cys Val Leu
    210                 215                 220

Leu Leu Lys Asn Gly Gln Trp Asn Asp Val Pro Cys Ser Thr Ser His
225                 230                 235                 240

Leu Ala Val Cys Glu Phe Pro Ile
```

245

<210> 31
<211> 329
<212> PRT
<213> Homo sapiens

<400> 31

Met Trp Cys Ile Val Leu Phe Ser Leu Leu Ala Trp Val Tyr Ala Glu
1 5 10 15

Pro Thr Met Tyr Gly Glu Ile Leu Ser Pro Asn Tyr Pro Gln Ala Tyr
20 25 30

Pro Ser Glu Val Glu Lys Ser Trp Asp Ile Glu Val Pro Glu Gly Tyr
35 40 45

Gly Ile His Leu Tyr Phe Thr His Leu Asp Ile Glu Leu Ser Glu Asn
50 55 60

Cys Ala Tyr Asp Ser Val Gln Ile Ile Ser Gly Asp Thr Glu Glu Gly
65 70 75 80

Arg Leu Cys Gly Gln Arg Ser Ser Asn Asn Pro His Ser Pro Ile Val
85 90 95

Glu Glu Phe Gln Val Pro Tyr Asn Lys Leu Gln Val Ile Phe Lys Ser
100 105 110

Asp Phe Ser Asn Glu Glu Arg Phe Thr Gly Phe Ala Ala Tyr Tyr Val
115 120 125

Ala Thr Asp Ile Asn Glu Cys Thr Asp Phe Val Asp Val Pro Cys Ser
130 135 140

His Phe Cys Asn Asn Phe Ile Gly Gly Tyr Phe Cys Ser Cys Pro Pro
145 150 155 160

Glu Tyr Phe Leu His Asp Asp Met Lys Asn Cys Gly Val Asn Cys Ser
165 170 175

Gly Asp Val Phe Thr Ala Leu Ile Gly Glu Ile Ala Ser Pro Asn Tyr
180 185 190

```
Pro Lys Pro Tyr Pro Glu Asn Ser Arg Cys Glu Tyr Gln Ile Arg Leu
        195                 200                 205

Glu Lys Gly Phe Gln Val Val Val Thr Leu Arg Arg Glu Asp Phe Asp
    210                 215                 220

Val Glu Ala Ala Asp Ser Ala Gly Asn Cys Leu Asp Ser Leu Val Phe
225                 230                 235                 240

Val Ala Gly Asp Arg Gln Phe Gly Pro Tyr Cys Gly His Gly Phe Pro
                245                 250                 255

Gly Pro Leu Asn Ile Glu Thr Lys Ser Asn Ala Leu Asp Ile Ile Phe
            260                 265                 270

Gln Thr Asp Leu Thr Gly Gln Lys Lys Gly Trp Lys Leu Arg Tyr His
        275                 280                 285

Gly Asp Pro Met Pro Cys Pro Lys Glu Asp Thr Pro Asn Ser Val Trp
    290                 295                 300

Glu Pro Ala Lys Ala Lys Tyr Val Phe Arg Asp Val Val Gln Ile Thr
305                 310                 315                 320

Cys Leu Asp Gly Phe Glu Val Val Glu
                325
```

<210> 32
<211> 248
<212> PRT
<213> Homo sapiens

<400> 32

```
Met Ser Leu Phe Pro Ser Leu Pro Leu Leu Leu Leu Ser Met Val Ala
1               5                   10                  15

Ala Ser Tyr Ser Glu Thr Val Thr Cys Glu Asp Ala Gln Lys Thr Cys
            20                  25                  30

Pro Ala Val Ile Ala Cys Ser Ser Pro Gly Ile Asn Gly Phe Pro Gly
        35                  40                  45

Lys Asp Gly Cys Asp Gly Thr Lys Gly Glu Lys Gly Glu Pro Gly Gln
    50                  55                  60
```

```
Gly Leu Arg Gly Leu Gln Gly Pro Pro Gly Lys Leu Gly Pro Pro Gly
65                  70                  75                  80

Asn Pro Gly Pro Ser Gly Ser Pro Gly Pro Lys Gly Gln Lys Gly Asp
                85                  90                  95

Pro Gly Lys Ser Pro Asp Gly Asp Ser Ser Leu Ala Ala Ser Glu Arg
            100                 105                 110

Lys Ala Leu Gln Thr Glu Met Ala Arg Ile Lys Lys Trp Leu Thr Phe
        115                 120                 125

Ser Leu Gly Lys Gln Val Gly Asn Lys Phe Phe Leu Thr Asn Gly Glu
    130                 135                 140

Ile Met Thr Phe Glu Lys Val Lys Ala Leu Cys Val Lys Phe Gln Ala
145                 150                 155                 160

Ser Val Ala Thr Pro Arg Asn Ala Ala Glu Asn Gly Ala Ile Gln Asn
                165                 170                 175

Leu Ile Lys Glu Glu Ala Phe Leu Gly Ile Thr Asp Glu Lys Thr Glu
            180                 185                 190

Gly Gln Phe Val Asp Leu Thr Gly Asn Arg Leu Thr Tyr Thr Asn Trp
        195                 200                 205

Asn Glu Gly Glu Pro Asn Asn Ala Gly Ser Asp Glu Asp Cys Val Leu
    210                 215                 220

Leu Leu Lys Asn Gly Gln Trp Asn Asp Val Pro Cys Ser Thr Ser His
225                 230                 235                 240

Leu Ala Val Cys Glu Phe Pro Ile
                245


<210>  33
<211>  248
<212>  PRT
<213>  Homo sapiens

<400>  33

Met Ser Leu Phe Pro Ser Leu Pro Leu Leu Leu Leu Ser Met Val Ala
1               5                   10                  15
```

```
Ala Ser Tyr Ser Glu Thr Val Thr Cys Glu Asp Ala Gln Lys Thr Cys
            20                  25                  30

Pro Ala Val Ile Ala Cys Ser Ser Pro Gly Ile Asn Gly Phe Pro Gly
        35                  40                  45

Lys Asp Gly Arg Asp Gly Thr Lys Gly Glu Lys Gly Glu Pro Gly Gln
    50                  55                  60

Gly Leu Arg Gly Leu Gln Gly Pro Pro Gly Lys Leu Gly Pro Pro Gly
65                  70                  75                  80

Asn Pro Gly Pro Ser Gly Ser Pro Gly Pro Lys Gly Gln Lys Gly Asp
                85                  90                  95

Pro Gly Lys Ser Pro Asp Gly Asp Ser Ser Leu Ala Ala Ser Glu Arg
            100                 105                 110

Lys Ala Leu Gln Thr Glu Met Ala Arg Ile Lys Lys Trp Leu Thr Phe
        115                 120                 125

Ser Leu Gly Lys Gln Val Gly Asn Lys Phe Phe Leu Thr Asn Gly Glu
    130                 135                 140

Ile Met Thr Phe Glu Lys Val Lys Ala Leu Cys Val Lys Phe Gln Ala
145                 150                 155                 160

Ser Val Ala Thr Pro Arg Asn Ala Ala Glu Asn Gly Ala Ile Gln Asn
                165                 170                 175

Leu Ile Lys Glu Glu Ala Phe Leu Gly Ile Thr Asp Glu Lys Thr Glu
            180                 185                 190

Gly Gln Phe Val Asp Leu Thr Gly Asn Arg Leu Thr Tyr Thr Asn Trp
        195                 200                 205

Asn Glu Gly Glu Pro Asn Asn Ala Gly Ser Asp Glu Asp Cys Val Leu
    210                 215                 220

Leu Leu Lys Asn Gly Gln Trp Asn Asp Val Pro Cys Ser Thr Ser His
225                 230                 235                 240
```

```
Leu Ala Val Cys Glu Phe Pro Ile
                245
```

<210> 34
<211> 248
<212> PRT
<213> Homo sapiens

<400> 34

```
Met Ser Leu Phe Pro Ser Leu Pro Leu Leu Leu Ser Met Val Ala
1               5                   10                  15

Ala Ser Tyr Ser Glu Thr Val Thr Cys Glu Asp Ala Gln Lys Thr Cys
            20                  25                  30

Pro Ala Val Ile Ala Cys Ser Ser Pro Gly Ile Asn Gly Phe Pro Gly
        35                  40                  45

Lys Asp Gly Arg Asp Gly Thr Lys Gly Glu Lys Gly Glu Pro Gly Gln
    50                  55                  60

Gly Leu Arg Gly Leu Gln Gly Pro Pro Gly Lys Leu Gly Pro Pro Gly
65                  70                  75                  80

Asn Pro Gly Pro Ser Gly Ser Pro Gly Pro Lys Gly Gln Lys Gly Asp
                85                  90                  95

Pro Gly Lys Ser Pro Asp Gly Asp Ser Ser Leu Ala Ala Ser Glu Arg
            100                 105                 110

Lys Ala Leu Gln Thr Glu Met Ala Arg Ile Lys Lys Trp Leu Thr Phe
        115                 120                 125

Ser Leu Gly Lys Gln Val Gly Asn Lys Phe Phe Leu Thr Asn Gly Glu
    130                 135                 140

Ile Met Thr Phe Glu Lys Val Lys Ala Leu Cys Val Lys Phe Gln Ala
145                 150                 155                 160

Ser Val Ala Thr Pro Arg Asn Ala Ala Glu Asn Gly Ala Ile Gln Asn
                165                 170                 175

Leu Ile Lys Glu Glu Ala Phe Leu Gly Ile Thr Asp Glu Lys Thr Glu
            180                 185                 190
```

```
Gly Gln Phe Val Asp Leu Thr Gly Asn Arg Leu Thr Tyr Thr Asn Trp
        195                 200                 205

Asn Glu Gly Glu Pro Asn Asn Ala Gly Ser Asp Glu Asp Cys Val Leu
    210                 215                 220

Leu Leu Lys Asn Gly Gln Trp Asn Asp Val Pro Cys Ser Thr Ser His
225                 230                 235                 240

Leu Ala Val Cys Glu Phe Pro Ile
                245
```

<210> 35
<211> 248
<212> PRT
<213> Homo sapiens

<400> 35

```
Met Ser Leu Phe Pro Ser Leu Pro Leu Leu Leu Leu Ser Met Val Ala
1               5                   10                  15

Ala Ser Tyr Ser Glu Thr Val Thr Cys Glu Asp Ala Gln Lys Thr Cys
            20                  25                  30

Pro Ala Val Ile Ala Cys Ser Ser Pro Gly Ile Asn Gly Phe Pro Gly
        35                  40                  45

Lys Asp Gly Arg Asp Asp Thr Lys Gly Glu Lys Gly Glu Pro Gly Gln
    50                  55                  60

Gly Leu Arg Gly Leu Gln Gly Pro Pro Gly Lys Leu Gly Pro Pro Gly
65                  70                  75                  80

Asn Pro Gly Pro Ser Gly Ser Pro Gly Pro Lys Gly Gln Lys Gly Asp
                85                  90                  95

Pro Gly Lys Ser Pro Asp Gly Asp Ser Ser Leu Ala Ala Ser Glu Arg
            100                 105                 110

Lys Ala Leu Gln Thr Glu Met Ala Arg Ile Lys Lys Trp Leu Thr Phe
        115                 120                 125

Ser Leu Gly Lys Gln Val Gly Asn Lys Phe Phe Leu Thr Asn Gly Glu
    130                 135                 140
```

```
Ile Met Thr Phe Glu Lys Val Lys Ala Leu Cys Val Lys Phe Gln Ala
145                 150                 155                 160

Ser Val Ala Thr Pro Arg Asn Ala Ala Glu Asn Gly Ala Ile Gln Asn
                165                 170                 175

Leu Ile Lys Glu Glu Ala Phe Leu Gly Ile Thr Asp Glu Lys Thr Glu
            180                 185                 190

Gly Gln Phe Val Asp Leu Thr Gly Asn Arg Leu Thr Tyr Thr Asn Trp
        195                 200                 205

Asn Glu Gly Glu Pro Asn Asn Ala Gly Ser Asp Glu Asp Cys Val Leu
    210                 215                 220

Leu Leu Lys Asn Gly Gln Trp Asn Asp Val Pro Cys Ser Thr Ser His
225                 230                 235                 240

Leu Ala Val Cys Glu Phe Pro Ile
                245
```

<210> 36
<211> 248
<212> PRT
<213> Homo sapiens

<400> 36

```
Met Ser Leu Phe Pro Ser Leu Pro Leu Leu Leu Leu Ser Met Val Ala
1               5                   10                  15

Ala Ser Tyr Ser Glu Thr Val Thr Cys Glu Asp Ala Gln Lys Thr Cys
            20                  25                  30

Pro Ala Val Ile Ala Cys Ser Ser Pro Gly Ile Asn Gly Phe Pro Gly
        35                  40                  45

Lys Asp Gly Arg Asp Gly Thr Lys Glu Glu Lys Gly Glu Pro Gly Gln
    50                  55                  60

Gly Leu Arg Gly Leu Gln Gly Pro Pro Gly Lys Leu Gly Pro Pro Gly
65                  70                  75                  80

Asn Pro Gly Pro Ser Gly Ser Pro Gly Pro Lys Gly Gln Lys Gly Asp
```

```
                85                  90                  95

Pro Gly Lys Ser Pro Asp Gly Asp Ser Ser Leu Ala Ala Ser Glu Arg
            100                 105                 110

Lys Ala Leu Gln Thr Glu Met Ala Arg Ile Lys Lys Trp Leu Thr Phe
        115                 120                 125

Ser Leu Gly Lys Gln Val Gly Asn Lys Phe Phe Leu Thr Asn Gly Glu
    130                 135                 140

Ile Met Thr Phe Glu Lys Val Lys Ala Leu Cys Val Lys Phe Gln Ala
145                 150                 155                 160

Ser Val Ala Thr Pro Arg Asn Ala Ala Glu Asn Gly Ala Ile Gln Asn
                165                 170                 175

Leu Ile Lys Glu Glu Ala Phe Leu Gly Ile Thr Asp Glu Lys Thr Glu
            180                 185                 190

Gly Gln Phe Val Asp Leu Thr Gly Asn Arg Leu Thr Tyr Thr Asn Trp
        195                 200                 205

Asn Glu Gly Glu Pro Asn Asn Ala Gly Ser Asp Glu Asp Cys Val Leu
    210                 215                 220

Leu Leu Lys Asn Gly Gln Trp Asn Asp Val Pro Cys Ser Thr Ser His
225                 230                 235                 240

Leu Ala Val Cys Glu Phe Pro Ile
                245
```

<210> 37
<211> 248
<212> PRT
<213> Homo sapiens

<400> 37

```
Met Ser Leu Phe Pro Ser Leu Pro Leu Leu Leu Leu Ser Met Val Ala
1               5                   10                  15

Ala Ser Tyr Ser Glu Thr Val Thr Cys Glu Asp Ala Gln Lys Thr Cys
            20                  25                  30
```

```
Pro Ala Val Ile Ala Cys Ser Ser Pro Gly Ile Asn Gly Phe Pro Gly
        35                  40                  45

Lys Asp Gly Arg Asp Gly Thr Lys Gly Glu Lys Gly Glu Pro Gly Gln
    50                  55                  60

Gly Leu Arg Gly Leu Gln Gly Pro Pro Gly Lys Leu Gly Pro Pro Gly
65                  70                  75                  80

Asn Pro Gly Pro Ser Gly Ser Pro Gly Pro Lys Gly Gln Lys Gly Asp
                85                  90                  95

Pro Gly Lys Ser Pro Asp Gly Asp Ser Ser Leu Ala Ala Ser Glu Arg
            100                 105                 110

Lys Ala Leu Gln Thr Glu Met Ala Arg Ile Lys Lys Trp Leu Thr Phe
        115                 120                 125

Ser Leu Gly Lys Gln Val Gly Asn Lys Phe Phe Leu Thr Asn Gly Glu
    130                 135                 140

Ile Met Thr Phe Glu Lys Val Lys Ala Leu Cys Val Lys Phe Gln Ala
145                 150                 155                 160

Ser Val Ala Thr Pro Arg Asn Ala Ala Glu Asn Gly Ala Ile Gln Asn
                165                 170                 175

Leu Ile Lys Glu Glu Ala Phe Leu Gly Ile Thr Asp Glu Lys Thr Glu
            180                 185                 190

Gly Gln Phe Val Asp Leu Thr Gly Asn Arg Leu Thr Tyr Thr Asn Trp
        195                 200                 205

Asn Glu Gly Glu Pro Asn Asn Ala Gly Ser Asp Glu Asp Cys Val Leu
    210                 215                 220

Leu Leu Lys Asn Gly Gln Trp Asn Asp Val Pro Cys Ser Thr Ser His
225                 230                 235                 240

Leu Ala Val Cys Glu Phe Pro Ile
                245
```

<210> 38
<211> 248

<212> PRT
<213> Homo sapiens

<400> 38

```
Met Ser Leu Phe Pro Ser Leu Pro Leu Leu Leu Leu Ser Met Val Ala
1               5                  10                  15

Ala Ser Tyr Ser Glu Thr Val Thr Cys Glu Asp Ala Gln Lys Thr Cys
            20                  25                  30

Pro Ala Val Ile Ala Cys Ser Ser Pro Gly Ile Asn Gly Phe Pro Gly
        35                  40                  45

Lys Asp Gly Arg Asp Gly Thr Lys Gly Glu Lys Gly Glu Pro Gly Gln
    50                  55                  60

Gly Leu Arg Gly Leu Gln Gly Pro Pro Gly Lys Leu Gly Pro Pro Gly
65                  70                  75                  80

Asn Pro Gly Pro Ser Gly Ser Pro Gly Pro Lys Gly Gln Lys Gly Asp
                85                  90                  95

Pro Gly Lys Ser Pro Asp Gly Asp Ser Ser Leu Ala Ala Ser Glu Arg
            100                 105                 110

Lys Ala Leu Gln Thr Glu Met Ala Arg Ile Lys Lys Trp Leu Thr Phe
        115                 120                 125

Ser Leu Gly Lys Gln Val Gly Asn Lys Phe Phe Leu Thr Asn Gly Glu
    130                 135                 140

Ile Met Thr Phe Glu Lys Val Lys Ala Leu Cys Val Lys Phe Gln Ala
145                 150                 155                 160

Ser Val Ala Thr Pro Arg Asn Ala Ala Glu Asn Gly Ala Ile Gln Asn
                165                 170                 175

Leu Ile Lys Glu Glu Ala Phe Leu Gly Ile Thr Asp Glu Lys Thr Glu
            180                 185                 190

Gly Gln Phe Val Asp Leu Thr Gly Asn Arg Leu Thr Tyr Thr Asn Trp
        195                 200                 205

Asn Glu Gly Glu Pro Asn Asn Ala Gly Ser Asp Glu Asp Cys Val Leu
```

```
    210                 215                 220

Leu Leu Lys Asn Gly Gln Trp Asn Asp Val Pro Cys Ser Thr Ser His
225                 230                 235                 240

Leu Ala Val Cys Glu Phe Pro Ile
                245
```

<210> 39
<211> 652
<212> PRT
<213> Homo sapiens

<400> 39

```
Met Ala Thr Ser Met Gly Leu Leu Leu Leu Leu Leu Leu Leu Leu Thr
1               5                   10                  15

Gln Pro Gly Ala Gly Thr Gly Ala Asp Thr Glu Ala Val Val Cys Val
            20                  25                  30

Gly Thr Ala Cys Tyr Thr Ala His Ser Gly Lys Leu Ser Ala Ala Glu
        35                  40                  45

Ala Gln Asn His Cys Asn Gln Asn Gly Gly Asn Leu Ala Thr Val Lys
    50                  55                  60

Ser Lys Glu Glu Ala Gln His Val Gln Arg Val Leu Ala Gln Leu Leu
65                  70                  75                  80

Arg Arg Glu Ala Ala Leu Thr Ala Arg Met Ser Lys Phe Trp Ile Gly
                85                  90                  95

Leu Gln Arg Glu Lys Gly Lys Cys Leu Asp Pro Ser Leu Pro Leu Lys
            100                 105                 110

Gly Phe Ser Trp Val Gly Gly Gly Glu Asp Thr Pro Tyr Ser Asn Trp
        115                 120                 125

His Lys Glu Leu Arg Asn Ser Cys Ile Ser Lys Arg Cys Val Ser Leu
    130                 135                 140

Leu Leu Asp Leu Ser Gln Pro Leu Leu Pro Asn Arg Leu Pro Lys Trp
145                 150                 155                 160
```

```
Ser Glu Gly Pro Cys Gly Ser Pro Gly Ser Pro Gly Ser Asn Ile Glu
                165                 170                 175

Gly Phe Val Cys Lys Phe Ser Phe Lys Gly Met Cys Arg Pro Leu Ala
            180                 185                 190

Leu Gly Gly Pro Gly Gln Val Thr Tyr Thr Thr Pro Phe Gln Thr Thr
        195                 200                 205

Ser Ser Ser Leu Glu Ala Val Pro Phe Ala Ser Ala Ala Asn Val Ala
    210                 215                 220

Cys Gly Glu Gly Asp Lys Asp Glu Thr Gln Ser His Tyr Phe Leu Cys
225                 230                 235                 240

Lys Glu Lys Ala Pro Asp Val Phe Asp Trp Gly Ser Ser Gly Pro Leu
                245                 250                 255

Cys Val Ser Pro Lys Tyr Gly Cys Asn Phe Asn Asn Gly Gly Cys His
            260                 265                 270

Gln Asp Cys Phe Glu Gly Gly Asp Gly Ser Phe Leu Cys Gly Cys Arg
        275                 280                 285

Pro Gly Phe Arg Leu Leu Asp Asp Leu Val Thr Cys Ala Ser Arg Asn
    290                 295                 300

Pro Cys Ser Ser Ser Pro Cys Arg Gly Gly Ala Thr Cys Val Leu Gly
305                 310                 315                 320

Pro His Gly Lys Asn Tyr Thr Cys Arg Cys Pro Gln Gly Tyr Gln Leu
                325                 330                 335

Asp Ser Ser Gln Leu Asp Cys Val Asp Val Asp Glu Cys Gln Asp Ser
            340                 345                 350

Pro Cys Ala Gln Glu Cys Val Asn Thr Pro Gly Gly Phe Arg Cys Glu
        355                 360                 365

Cys Trp Val Gly Tyr Glu Pro Gly Gly Pro Gly Glu Gly Ala Cys Gln
    370                 375                 380

Asp Val Asp Glu Cys Ala Leu Gly Arg Ser Pro Cys Ala Gln Gly Cys
385                 390                 395                 400
```

Thr Asn Thr Asp Gly Ser Phe His Cys Ser Cys Glu Glu Gly Tyr Val
405 410 415

Leu Ala Gly Glu Asp Gly Thr Gln Cys Gln Asp Val Asp Glu Cys Val
420 425 430

Gly Pro Gly Gly Pro Leu Cys Asp Ser Leu Cys Phe Asn Thr Gln Gly
435 440 445

Ser Phe His Cys Gly Cys Leu Pro Gly Trp Val Leu Ala Pro Asn Gly
450 455 460

Val Ser Cys Thr Met Gly Pro Val Ser Leu Gly Pro Pro Ser Gly Pro
465 470 475 480

Pro Asp Glu Glu Asp Lys Gly Glu Lys Glu Gly Ser Thr Val Pro Arg
485 490 495

Ala Ala Thr Ala Ser Pro Thr Arg Gly Pro Glu Gly Thr Pro Lys Ala
500 505 510

Thr Pro Thr Thr Ser Arg Pro Ser Leu Ser Ser Asp Ala Pro Ile Thr
515 520 525

Ser Ala Pro Leu Lys Met Leu Ala Pro Ser Gly Ser Ser Gly Val Trp
530 535 540

Arg Glu Pro Ser Ile His His Ala Thr Ala Ala Ser Gly Pro Gln Glu
545 550 555 560

Pro Ala Gly Gly Asp Ser Ser Val Ala Thr Gln Asn Asn Asp Gly Thr
565 570 575

Asp Gly Gln Lys Leu Leu Leu Phe Tyr Ile Leu Gly Thr Val Val Ala
580 585 590

Ile Leu Leu Leu Leu Ala Leu Ala Leu Gly Leu Leu Val Tyr Arg Lys
595 600 605

Arg Arg Ala Lys Arg Glu Glu Lys Lys Glu Lys Lys Pro Gln Asn Ala
610 615 620

```
Ala Asp Ser Tyr Ser Trp Val Pro Glu Arg Ala Glu Ser Arg Ala Met
625                 630                 635                 640


Glu Asn Gln Tyr Ser Pro Thr Pro Gly Thr Asp Cys
                645                 650
```

<210> 40
<211> 251
<212> PRT
<213> Danio rerio

<400> 40

```
Met Ala Leu Leu Lys Leu Phe Leu Gly Ala Leu Leu Leu Leu Gln Leu
1               5                   10                  15


Val Leu Gln Leu Met Ala Gly Ala Ala Asp Pro Gln Ser Leu Asn Cys
            20                  25                  30


Pro Ala Tyr Ala Gly Val Pro Gly Thr Pro Gly His Asn Gly Leu Pro
        35                  40                  45


Gly Arg Asp Gly Arg Val Gly Arg Asp Gly Ala Asn Gly Pro Lys Gly
    50                  55                  60


Glu Lys Gly Glu Pro Gly Val Asn Val Gln Gly Pro Pro Gly Lys Ala
65                  70                  75                  80


Gly Pro Pro Gly Pro Ala Gly Ala Lys Gly Glu Arg Gly Pro Ser Gly
                85                  90                  95


Leu Pro Gly Gln Asp Cys Met Ser Asp Ser Leu Lys Ser Glu Leu Gln
            100                 105                 110


Lys Leu Ser Asp Lys Ile Ala Leu Ile Glu Lys Val Val Asn Phe Lys
        115                 120                 125


Thr Phe Lys Lys Val Gly Gln Lys Tyr Tyr Val Thr Asp Asp Val Glu
    130                 135                 140


Glu Thr Phe Asp Lys Gly Met Gln Tyr Cys Ser Ser Asn Gly Gly Ala
145                 150                 155                 160


Leu Val Leu Pro Arg Thr Leu Glu Glu Asn Ala Leu Leu Lys Val Phe
                165                 170                 175
```

```
Val Ser Ser Ala Phe Lys Arg Leu Phe Ile Arg Ile Thr Asp Arg Glu
            180                 185                 190

Lys Glu Gly Glu Phe Val Asp Thr Asp Arg Lys Lys Leu Thr Phe Thr
        195                 200                 205

Asn Trp Gly Pro Asn Gln Pro Asp Asn Tyr Lys Gly Ala Gln Asp Cys
    210                 215                 220

Gly Ala Ile Ala Asp Ser Gly Leu Trp Asp Asp Val Ser Cys Asp Ser
225                 230                 235                 240

Leu Tyr Pro Ile Ile Cys Glu Ile Glu Ile Lys
                245                 250
```

<210> 41
<211> 118
<212> PRT
<213> Cyprinus carpio

<400> 41

```
Lys Ile Gln Thr Gly Ser Asn Thr Val Ser Ile Leu Phe His Ser Asp
1               5                   10                  15

Asn Ser Gly Asp Asn Leu Gly Trp Lys Leu Thr Tyr Thr Ser Thr Gly
            20                  25                  30

Ser Glu Cys Ser Pro Leu Ala Ala Pro Leu Asn Gly His Leu Glu Pro
        35                  40                  45

Leu Gln Ser Asn Tyr Ile Phe Lys Asp His Ile Met Leu Thr Cys Asp
    50                  55                  60

Pro Gly Tyr Ser Leu Arg Gln Gly Asp Lys Glu Phe Glu His Tyr Gln
65                  70                  75                  80

Ile Glu Cys Gln Arg Asp Gly Lys Trp Ser Ser Asp Val Pro Leu Cys
                85                  90                  95

Lys Lys Lys Glu Ser Gln Arg Arg His Arg Ser Leu Pro Ser Ile Leu
            100                 105                 110

Thr Asn Gln Ile Leu Ser
        115
```

<210> 42
<211> 652
<212> PRT
<213> Homo sapiens

<400> 42

Met Ala Thr Ser Met Gly Leu Leu Leu Leu Leu Leu Leu Leu Leu Thr
1 5 10 15

Gln Pro Gly Ala Gly Thr Gly Ala Asp Thr Glu Ala Val Val Cys Val
20 25 30

Gly Thr Ala Cys Tyr Thr Ala His Ser Gly Lys Leu Ser Ala Ala Glu
35 40 45

Ala Gln Asn His Cys Asn Gln Asn Gly Gly Asn Leu Ala Thr Val Lys
50 55 60

Ser Lys Glu Glu Ala Gln His Val Gln Arg Val Leu Ala Gln Leu Leu
65 70 75 80

Arg Arg Glu Ala Ala Leu Thr Ala Arg Met Ser Lys Phe Trp Ile Gly
85 90 95

Leu Gln Arg Glu Lys Gly Lys Cys Leu Asp Pro Ser Leu Pro Leu Lys
100 105 110

Gly Phe Ser Trp Val Gly Gly Gly Glu Asp Thr Pro Tyr Ser Asn Trp
115 120 125

His Lys Glu Leu Arg Asn Ser Cys Ile Ser Lys Arg Cys Val Ser Leu
130 135 140

Leu Leu Asp Leu Ser Gln Pro Leu Leu Pro Ser Arg Leu Pro Lys Trp
145 150 155 160

Ser Glu Gly Pro Cys Gly Ser Pro Gly Ser Pro Gly Ser Asn Ile Glu
165 170 175

Gly Phe Val Cys Lys Phe Ser Phe Lys Gly Met Cys Arg Pro Leu Ala
180 185 190

Leu Gly Gly Pro Gly Gln Val Thr Tyr Thr Thr Pro Phe Gln Thr Thr

```
        195                 200                 205

Ser Ser Ser Leu Glu Ala Val Pro Phe Ala Ser Ala Ala Asn Val Ala
    210                 215                 220

Cys Gly Glu Gly Asp Lys Asp Glu Thr Gln Ser His Tyr Phe Leu Cys
225                 230                 235                 240

Lys Glu Lys Ala Pro Asp Val Phe Asp Trp Gly Ser Ser Gly Pro Leu
                245                 250                 255

Cys Val Ser Pro Lys Tyr Gly Cys Asn Phe Asn Asn Gly Gly Cys His
            260                 265                 270

Gln Asp Cys Phe Glu Gly Gly Asp Gly Ser Phe Leu Cys Gly Cys Arg
        275                 280                 285

Pro Gly Phe Arg Leu Leu Asp Asp Leu Val Thr Cys Ala Ser Arg Asn
    290                 295                 300

Pro Cys Ser Ser Ser Pro Cys Arg Gly Gly Ala Thr Cys Val Leu Gly
305                 310                 315                 320

Pro His Gly Lys Asn Tyr Thr Cys Arg Cys Pro Gln Gly Tyr Gln Leu
                325                 330                 335

Asp Ser Ser Gln Leu Asp Cys Val Asp Val Asp Glu Cys Gln Asp Ser
            340                 345                 350

Pro Cys Ala Gln Glu Cys Val Asn Thr Pro Gly Gly Phe Arg Cys Glu
        355                 360                 365

Cys Trp Val Gly Tyr Glu Pro Gly Gly Pro Gly Glu Gly Ala Cys Gln
    370                 375                 380

Asp Val Asp Glu Cys Ala Leu Gly Arg Ser Pro Cys Ala Gln Gly Cys
385                 390                 395                 400

Thr Asn Thr Asp Gly Ser Phe His Cys Ser Cys Glu Glu Gly Tyr Val
                405                 410                 415

Leu Ala Gly Glu Asp Gly Thr Gln Cys Gln Asp Val Asp Glu Cys Val
            420                 425                 430
```

```
Gly Pro Gly Gly Pro Leu Cys Asp Ser Leu Cys Phe Asn Thr Gln Gly
        435                 440                 445

Ser Phe His Cys Gly Cys Leu Pro Gly Trp Val Leu Ala Pro Asn Gly
    450                 455                 460

Val Ser Cys Thr Met Gly Pro Val Ser Leu Gly Pro Pro Ser Gly Pro
465                 470                 475                 480

Pro Asp Glu Glu Asp Lys Gly Glu Lys Glu Gly Ser Thr Val Pro Arg
                485                 490                 495

Ala Ala Thr Ala Ser Pro Thr Arg Gly Pro Glu Gly Thr Pro Lys Ala
            500                 505                 510

Thr Pro Thr Thr Ser Arg Pro Ser Leu Ser Ser Asp Ala Pro Ile Thr
        515                 520                 525

Ser Ala Pro Leu Lys Met Leu Ala Pro Ser Gly Ser Pro Gly Val Trp
    530                 535                 540

Arg Glu Pro Ser Ile His His Ala Thr Ala Ala Ser Gly Pro Gln Glu
545                 550                 555                 560

Pro Ala Gly Gly Asp Ser Ser Val Ala Thr Gln Asn Asn Asp Gly Thr
                565                 570                 575

Asp Gly Gln Lys Leu Leu Leu Phe Tyr Ile Leu Gly Thr Val Val Ala
            580                 585                 590

Ile Leu Leu Leu Leu Ala Leu Ala Leu Gly Leu Leu Val Tyr Arg Lys
        595                 600                 605

Arg Arg Ala Lys Arg Glu Glu Lys Lys Glu Lys Lys Pro Gln Asn Ala
    610                 615                 620

Ala Asp Ser Tyr Ser Trp Val Pro Glu Arg Ala Glu Ser Arg Ala Met
625                 630                 635                 640

Glu Asn Gln Tyr Ser Pro Thr Pro Gly Thr Asp Cys
                645                 650
```

<210> 43

<211> 742
<212> PRT
<213> Mus musculus

<400> 43

```
Met Lys Asp Asp Phe Ala Glu Glu Glu Glu Val Gln Ser Phe Gly Tyr
1               5                  10                  15

Lys Arg Phe Gly Ile Gln Glu Gly Thr Gln Cys Thr Lys Cys Lys Asn
            20                  25                  30

Asn Trp Ala Leu Lys Phe Ser Ile Val Leu Leu Tyr Ile Leu Cys Ala
        35                  40                  45

Leu Leu Thr Ile Thr Val Ala Ile Leu Gly Tyr Lys Val Val Glu Lys
    50                  55                  60

Met Asp Asn Val Thr Asp Gly Met Glu Thr Ser His Gln Thr Tyr Asp
65                  70                  75                  80

Asn Lys Leu Thr Ala Val Glu Ser Asp Leu Lys Lys Leu Gly Asp Gln
                85                  90                  95

Ala Gly Lys Lys Ala Leu Ser Thr Asn Ser Glu Leu Ser Thr Phe Arg
            100                 105                 110

Ser Asp Ile Leu Asp Leu Arg Gln Gln Leu Gln Glu Ile Thr Glu Lys
        115                 120                 125

Thr Ser Lys Asn Lys Asp Thr Leu Glu Lys Leu Gln Ala Asn Gly Asp
    130                 135                 140

Ser Leu Val Asp Arg Gln Ser Gln Leu Lys Glu Thr Leu Gln Asn Asn
145                 150                 155                 160

Ser Phe Leu Ile Thr Thr Val Asn Lys Thr Leu Gln Ala Tyr Asn Gly
                165                 170                 175

Tyr Val Thr Asn Leu Gln Gln Asp Thr Ser Val Leu Gln Gly Asn Leu
            180                 185                 190

Gln Ser Gln Met Tyr Ser Gln Ser Val Val Ile Met Asn Leu Asn Asn
        195                 200                 205
```

```
Leu Asn Leu Thr Gln Val Gln Gln Arg Asn Leu Ile Ser Asn Leu Gln
    210                 215                 220

Gln Ser Val Asp Asp Thr Ser Leu Ala Ile Gln Arg Ile Lys Asn Asp
225                 230                 235                 240

Phe Gln Asn Leu Gln Gln Val Phe Leu Gln Ala Lys Lys Asp Thr Asp
                245                 250                 255

Trp Leu Lys Glu Lys Val Gln Ser Leu Gln Thr Leu Ala Ala Asn Asn
            260                 265                 270

Ser Ala Leu Ala Lys Ala Asn Asn Asp Thr Leu Glu Asp Met Asn Ser
        275                 280                 285

Gln Leu Ser Ser Phe Thr Gly Gln Met Asp Asn Ile Thr Thr Ile Ser
    290                 295                 300

Gln Ala Asn Glu Gln Ser Leu Lys Asp Leu Gln Asp Leu His Lys Asp
305                 310                 315                 320

Thr Glu Asn Arg Thr Ala Val Lys Phe Ser Gln Leu Glu Glu Arg Phe
                325                 330                 335

Gln Val Phe Glu Thr Asp Ile Val Asn Ile Ile Ser Asn Ile Ser Tyr
            340                 345                 350

Thr Ala His His Leu Arg Thr Leu Thr Ser Asn Leu Asn Asp Val Arg
        355                 360                 365

Thr Thr Cys Thr Asp Thr Leu Thr Arg His Thr Asp Asp Leu Thr Ser
    370                 375                 380

Leu Asn Asn Thr Leu Val Asn Ile Arg Leu Asp Ser Ile Ser Leu Arg
385                 390                 395                 400

Met Gln Gln Asp Met Met Arg Ser Lys Leu Asp Thr Glu Val Ala Asn
                405                 410                 415

Leu Ser Val Val Met Glu Glu Met Lys Leu Val Asp Ser Lys His Gly
            420                 425                 430

Gln Leu Ile Lys Asn Phe Thr Ile Leu Gln Gly Pro Pro Gly Pro Arg
        435                 440                 445
```

```
Gly Pro Lys Gly Asp Arg Gly Ser Gln Gly Pro Pro Gly Pro Thr Gly
    450                 455                 460

Asn Lys Gly Gln Lys Gly Glu Lys Gly Glu Pro Gly Pro Pro Gly Pro
465                 470                 475                 480

Ala Gly Glu Arg Gly Thr Ile Gly Pro Val Gly Pro Pro Gly Glu Arg
                485                 490                 495

Gly Ser Lys Gly Ser Lys Gly Ser Gln Gly Pro Lys Gly Ser Arg Gly
            500                 505                 510

Ser Pro Gly Lys Pro Gly Pro Gln Gly Pro Ser Gly Asp Pro Gly Pro
        515                 520                 525

Pro Gly Pro Pro Gly Lys Asp Gly Leu Pro Gly Pro Gln Gly Pro Pro
    530                 535                 540

Gly Phe Gln Gly Leu Gln Gly Thr Val Gly Glu Pro Gly Val Pro Gly
545                 550                 555                 560

Pro Arg Gly Leu Pro Gly Leu Pro Gly Val Pro Gly Met Pro Gly Pro
                565                 570                 575

Lys Gly Pro Pro Gly Pro Pro Gly Pro Ser Gly Ala Met Glu Pro Leu
            580                 585                 590

Ala Leu Gln Asn Glu Pro Thr Pro Ala Ser Glu Val Asn Gly Cys Pro
        595                 600                 605

Pro His Trp Lys Asn Phe Thr Asp Lys Cys Tyr Tyr Phe Ser Leu Glu
    610                 615                 620

Lys Glu Ile Phe Glu Asp Ala Lys Leu Phe Cys Glu Asp Lys Ser Ser
625                 630                 635                 640

His Leu Val Phe Ile Asn Ser Arg Glu Glu Gln Gln Trp Ile Lys Lys
                645                 650                 655

His Thr Val Gly Arg Glu Ser His Trp Ile Gly Leu Thr Asp Ser Glu
            660                 665                 670
```

```
Gln Glu Ser Glu Trp Lys Trp Leu Asp Gly Ser Pro Val Asp Tyr Lys
        675                 680                 685

Asn Trp Lys Ala Gly Gln Pro Asp Asn Trp Gly Ser Gly His Gly Pro
    690                 695                 700

Gly Glu Asp Cys Ala Gly Leu Ile Tyr Ala Gly Gln Trp Asn Asp Phe
705                 710                 715                 720

Gln Cys Asp Glu Ile Asn Asn Phe Ile Cys Glu Lys Glu Arg Glu Ala
                725                 730                 735

Val Pro Ser Ser Ile Leu
            740
```

<210> 44
<211> 321
<212> PRT
<213> Bos taurus

<400> 44

```
Met Leu Pro Leu Pro Leu Ser Ile Leu Leu Leu Leu Thr Gln Ser Gln
1               5                   10                  15

Ser Phe Leu Gly Glu Glu Met Asp Val Tyr Ser Glu Lys Thr Leu Thr
            20                  25                  30

Asp Pro Cys Thr Leu Val Val Cys Ala Pro Pro Ala Asp Ser Leu Arg
        35                  40                  45

Gly His Asp Gly Arg Asp Gly Lys Glu Gly Pro Gln Gly Glu Lys Gly
    50                  55                  60

Asp Pro Gly Pro Pro Gly Met Pro Gly Pro Ala Gly Arg Glu Gly Pro
65                  70                  75                  80

Ser Gly Arg Gln Gly Ser Met Gly Pro Pro Gly Thr Pro Gly Pro Lys
                85                  90                  95

Gly Glu Pro Gly Pro Glu Gly Gly Val Gly Ala Pro Gly Met Pro Gly
            100                 105                 110

Ser Pro Gly Pro Ala Gly Leu Lys Gly Glu Arg Gly Thr Pro Gly Pro
        115                 120                 125
```

```
Gly Gly Ala Ile Gly Pro Gln Gly Pro Ser Gly Ala Met Gly Pro Pro
    130                 135                 140

Gly Leu Lys Gly Asp Arg Gly Asp Pro Gly Glu Lys Gly Ala Arg Gly
145                 150                 155                 160

Glu Thr Ser Val Leu Glu Val Asp Thr Leu Arg Gln Arg Met Arg Asn
                165                 170                 175

Leu Glu Gly Glu Val Gln Arg Leu Gln Asn Ile Val Thr Gln Tyr Arg
            180                 185                 190

Lys Ala Val Leu Phe Pro Asp Gly Gln Ala Val Gly Glu Lys Ile Phe
        195                 200                 205

Lys Thr Ala Gly Ala Val Lys Ser Tyr Ser Asp Ala Glu Gln Leu Cys
    210                 215                 220

Arg Glu Ala Lys Gly Gln Leu Ala Ser Pro Arg Ser Ser Ala Glu Asn
225                 230                 235                 240

Glu Ala Val Thr Gln Leu Val Arg Ala Lys Asn Lys His Ala Tyr Leu
                245                 250                 255

Ser Met Asn Asp Ile Ser Lys Glu Gly Lys Phe Thr Tyr Pro Thr Gly
            260                 265                 270

Gly Ser Leu Asp Tyr Ser Asn Trp Ala Pro Gly Glu Pro Asn Asn Arg
        275                 280                 285

Ala Lys Asp Glu Gly Pro Glu Asn Cys Leu Glu Ile Tyr Ser Asp Gly
    290                 295                 300

Asn Trp Asn Asp Ile Glu Cys Arg Glu Glu Arg Leu Val Ile Cys Glu
305                 310                 315                 320

Phe
```

<210> 45
<211> 371
<212> PRT
<213> Bos taurus

<400> 45

```
Met Leu Leu Leu Pro Leu Ser Val Leu Leu Leu Leu Thr Gln Pro Trp
1               5                  10                  15

Arg Ser Leu Gly Ala Glu Met Lys Ile Tyr Ser Gln Lys Thr Leu Ala
            20                  25                  30

Asn Gly Cys Thr Leu Val Val Cys Arg Pro Pro Glu Gly Gly Leu Pro
        35                  40                  45

Gly Arg Asp Gly Gln Asp Gly Arg Glu Gly Pro Gln Gly Glu Lys Gly
    50                  55                  60

Asp Pro Gly Ser Pro Gly Pro Ala Gly Arg Ala Gly Arg Pro Gly Pro
65                  70                  75                  80

Ala Gly Pro Ile Gly Pro Lys Gly Asp Asn Gly Ser Ala Gly Glu Pro
                85                  90                  95

Gly Pro Lys Gly Asp Thr Gly Pro Pro Gly Pro Pro Gly Met Pro Gly
            100                 105                 110

Pro Ala Gly Arg Glu Gly Pro Ser Gly Lys Gln Gly Ser Met Gly Pro
        115                 120                 125

Pro Gly Thr Pro Gly Pro Lys Gly Asp Thr Gly Pro Lys Gly Gly Met
    130                 135                 140

Gly Ala Pro Gly Met Gln Gly Ser Pro Gly Pro Ala Gly Leu Lys Gly
145                 150                 155                 160

Glu Arg Gly Ala Pro Gly Glu Leu Gly Ala Pro Gly Ser Ala Gly Val
                165                 170                 175

Ala Gly Pro Ala Gly Ala Ile Gly Pro Gln Gly Pro Ser Gly Ala Arg
            180                 185                 190

Gly Pro Pro Gly Leu Lys Gly Asp Arg Gly Asp Pro Gly Glu Arg Gly
        195                 200                 205

Ala Lys Gly Glu Ser Gly Leu Ala Asp Val Asn Ala Leu Lys Gln Arg
    210                 215                 220
```

```
Val Thr Ile Leu Glu Gly Gln Leu Gln Arg Leu Gln Asn Ala Phe Ser
225                 230                 235                 240

Arg Tyr Lys Lys Ala Val Leu Phe Pro Asp Gly Gln Ala Val Gly Lys
                245                 250                 255

Lys Ile Phe Lys Thr Ala Gly Ala Val Lys Ser Tyr Ser Asp Ala Gln
            260                 265                 270

Gln Leu Cys Arg Glu Ala Lys Gly Gln Leu Ala Ser Pro Arg Ser Ala
        275                 280                 285

Ala Glu Asn Glu Ala Val Ala Gln Leu Val Arg Ala Lys Asn Asn Asp
    290                 295                 300

Ala Phe Leu Ser Met Asn Asp Ile Ser Thr Glu Gly Lys Phe Thr Tyr
305                 310                 315                 320

Pro Thr Gly Glu Ser Leu Val Tyr Ser Asn Trp Ala Ser Gly Glu Pro
                325                 330                 335

Asn Asn Asn Asn Ala Gly Gln Pro Glu Asn Cys Val Gln Ile Tyr Arg
            340                 345                 350

Glu Gly Lys Trp Asn Asp Val Pro Cys Ser Glu Pro Leu Leu Val Ile
        355                 360                 365

Cys Glu Phe
    370
```

<210> 46
<211> 272
<212> PRT
<213> Mus musculus

<400> 46

```
Met Met Met Arg Asp Leu Ala Leu Ala Gly Met Leu Ile Ser Leu Ala
1               5                   10                  15

Phe Leu Ser Leu Leu Pro Ser Gly Cys Pro Gln Gln Thr Thr Glu Asp
            20                  25                  30

Ala Cys Ser Val Gln Ile Leu Val Pro Gly Leu Lys Gly Asp Ala Gly
        35                  40                  45
```

```
Glu Lys Gly Asp Lys Gly Ala Pro Gly Arg Pro Gly Arg Val Gly Pro
    50                  55                  60

Thr Gly Glu Lys Gly Asp Met Gly Asp Lys Gly Gln Lys Gly Thr Val
65                  70                  75                  80

Gly Arg His Gly Lys Ile Gly Pro Ile Gly Ala Lys Gly Glu Lys Gly
                85                  90                  95

Asp Ser Gly Asp Ile Gly Pro Pro Gly Pro Ser Gly Glu Pro Gly Ile
            100                 105                 110

Pro Cys Glu Cys Ser Gln Leu Arg Lys Ala Ile Gly Glu Met Asp Asn
        115                 120                 125

Gln Val Thr Gln Leu Thr Thr Glu Leu Lys Phe Ile Lys Asn Ala Val
    130                 135                 140

Ala Gly Val Arg Glu Thr Glu Ser Lys Ile Tyr Leu Leu Val Lys Glu
145                 150                 155                 160

Glu Lys Arg Tyr Ala Asp Ala Gln Leu Ser Cys Gln Ala Arg Gly Gly
                165                 170                 175

Thr Leu Ser Met Pro Lys Asp Glu Ala Ala Asn Gly Leu Met Ala Ser
            180                 185                 190

Tyr Leu Ala Gln Ala Gly Leu Ala Arg Val Phe Ile Gly Ile Asn Asp
        195                 200                 205

Leu Glu Lys Glu Gly Ala Phe Val Tyr Ser Asp Arg Ser Pro Met Gln
    210                 215                 220

Thr Phe Asn Lys Trp Arg Ser Gly Glu Pro Asn Asn Ala Tyr Asp Glu
225                 230                 235                 240

Glu Asp Cys Val Glu Met Val Ala Ser Gly Gly Trp Asn Asp Val Ala
                245                 250                 255

Cys His Ile Thr Met Tyr Phe Met Cys Glu Phe Asp Lys Glu Asn Leu
            260                 265                 270
```

<210> 47

<211> 420
<212> PRT
<213> Mus musculus

<400> 47

```
Met Asn Gly Phe Arg Val Leu Leu Arg Ser Asn Leu Ser Met Leu Leu
1               5                  10                  15

Leu Leu Ala Leu Leu His Phe Gln Ser Leu Gly Leu Asp Val Asp Ser
            20                  25                  30

Arg Ser Ala Ala Glu Val Cys Ala Thr His Thr Ile Ser Pro Gly Pro
        35                  40                  45

Lys Gly Asp Asp Gly Glu Arg Gly Asp Thr Gly Glu Glu Gly Lys Asp
    50                  55                  60

Gly Lys Val Gly Arg Gln Gly Pro Lys Gly Val Lys Gly Glu Leu Gly
65                  70                  75                  80

Asp Met Gly Ala Gln Gly Asn Ile Gly Lys Ser Gly Pro Ile Gly Lys
                85                  90                  95

Lys Gly Asp Lys Gly Glu Lys Gly Leu Leu Gly Ile Pro Gly Glu Lys
            100                 105                 110

Gly Lys Ala Gly Thr Ile Cys Asp Cys Gly Arg Tyr Arg Lys Val Val
        115                 120                 125

Gly Gln Leu Asp Ile Ser Val Ala Arg Leu Lys Thr Ser Met Lys Phe
    130                 135                 140

Ile Lys Asn Val Ile Ala Gly Ile Arg Glu Thr Glu Glu Lys Phe Tyr
145                 150                 155                 160

Tyr Ile Val Gln Glu Glu Lys Asn Tyr Arg Glu Ser Leu Thr His Cys
                165                 170                 175

Arg Ile Arg Gly Gly Met Leu Ala Met Pro Lys Asp Glu Val Val Asn
            180                 185                 190

Thr Leu Ile Ala Asp Tyr Val Ala Lys Ser Gly Phe Phe Arg Val Phe
        195                 200                 205
```

```
Ile Gly Val Asn Asp Leu Glu Arg Glu Gly Gln Tyr Val Phe Thr Asp
    210                 215                 220

Asn Thr Pro Leu Gln Asn Tyr Ser Asn Trp Lys Glu Glu Glu Pro Ser
225                 230                 235                 240

Asp Pro Ser Gly His Glu Asp Cys Val Glu Met Leu Ser Ser Gly Arg
                245                 250                 255

Trp Asn Asp Thr Glu Cys His Leu Thr Met Tyr Phe Val Ser Ser Leu
            260                 265                 270

Gln Glu Asp Leu Ile Glu Asp Cys Leu Arg Glu Gln Gly Leu Leu Val
        275                 280                 285

Gln Val Thr Pro Ala Asn Gln Glu Leu Leu Phe Gly Ile Asp Thr Phe
    290                 295                 300

Leu Gly Pro Met Ser Cys Val Tyr Gln Arg Thr Gly Thr Lys Gln Lys
305                 310                 315                 320

Leu Tyr Ser Gln Cys Arg Leu Trp Asp Gly Leu Ala Lys Lys Gln Thr
                325                 330                 335

Asn Glu Thr Ala Asn Ile Ala Thr Phe Cys Lys Gly Ala Glu Pro Asn
            340                 345                 350

Arg Gly Ser Arg Pro Cys Gly Gln Lys Gln Glu Met Met Thr Leu Met
        355                 360                 365

Met Ser Gly Asn Lys Gly Ile Thr Thr Phe Pro Glu Ser Asp Asn Leu
    370                 375                 380

Phe Lys Trp Val Gly Thr Met Leu Gly Ala Ala Gly Thr Ile Asp Glu
385                 390                 395                 400

Asp Leu Lys Tyr Lys Leu Ser Leu Asn Ser Pro Val Val Thr Leu Ile
                405                 410                 415

Ile His Pro Gln
            420
```

<210> 48
<211> 742

<212> PRT
<213> Mus musculus

<400> 48

```
Met Lys Asp Asp Phe Ala Glu Glu Glu Glu Val Gln Ser Phe Gly Tyr
1               5                  10                  15

Lys Arg Phe Gly Ile Gln Glu Gly Thr Gln Cys Thr Lys Cys Lys Asn
            20                  25                  30

Asn Trp Ala Leu Lys Phe Ser Ile Val Leu Leu Tyr Ile Leu Cys Ala
        35                  40                  45

Leu Leu Thr Ile Thr Val Ala Ile Leu Gly Tyr Lys Val Val Glu Lys
    50                  55                  60

Met Asp Asn Val Thr Asp Gly Met Glu Thr Ser His Gln Thr Tyr Asp
65                  70                  75                  80

Asn Lys Leu Thr Ala Val Glu Ser Asp Leu Lys Lys Leu Gly Asp Gln
                85                  90                  95

Ala Gly Lys Lys Ala Leu Ser Thr Asn Ser Glu Leu Ser Thr Phe Arg
            100                 105                 110

Ser Asp Ile Leu Asp Leu Arg Gln Gln Leu Gln Glu Ile Thr Glu Lys
        115                 120                 125

Thr Ser Lys Asn Lys Asp Thr Leu Glu Lys Leu Gln Ala Asn Gly Asp
    130                 135                 140

Ser Leu Val Asp Arg Gln Ser Gln Leu Lys Glu Thr Leu Gln Asn Asn
145                 150                 155                 160

Ser Phe Leu Ile Thr Thr Val Asn Lys Thr Leu Gln Ala Tyr Asn Gly
                165                 170                 175

Tyr Val Thr Asn Leu Gln Gln Asp Thr Ser Val Leu Gln Gly Asn Leu
            180                 185                 190

Gln Ser Gln Met Tyr Ser Gln Ser Val Val Ile Met Asn Leu Asn Asn
        195                 200                 205

Leu Asn Leu Thr Gln Val Gln Gln Arg Asn Leu Ile Ser Asn Leu Gln
```

```
    210                 215                 220

Gln Ser Val Asp Asp Thr Ser Leu Ala Ile Gln Arg Ile Lys Asn Asp
225                 230                 235                 240

Phe Gln Asn Leu Gln Gln Val Phe Leu Gln Ala Lys Lys Asp Thr Asp
                245                 250                 255

Trp Leu Lys Glu Lys Val Gln Ser Leu Gln Thr Leu Ala Ala Asn Asn
            260                 265                 270

Ser Ala Leu Ala Lys Ala Asn Asn Asp Thr Leu Glu Asp Met Asn Ser
        275                 280                 285

Gln Leu Ser Ser Phe Thr Gly Gln Met Asp Asn Ile Thr Thr Ile Ser
    290                 295                 300

Gln Ala Asn Glu Gln Ser Leu Lys Asp Leu Gln Asp Leu His Lys Asp
305                 310                 315                 320

Thr Glu Asn Arg Thr Ala Val Lys Phe Ser Gln Leu Glu Glu Arg Phe
                325                 330                 335

Gln Val Phe Glu Thr Asp Ile Val Asn Ile Ile Ser Asn Ile Ser Tyr
            340                 345                 350

Thr Ala His His Leu Arg Thr Leu Thr Ser Asn Leu Asn Asp Val Arg
        355                 360                 365

Thr Thr Cys Thr Asp Thr Leu Thr Arg His Thr Asp Asp Leu Thr Ser
    370                 375                 380

Leu Asn Asn Thr Leu Val Asn Ile Arg Leu Asp Ser Ile Ser Leu Arg
385                 390                 395                 400

Met Gln Gln Asp Met Met Arg Ser Lys Leu Asp Thr Glu Val Ala Asn
                405                 410                 415

Leu Ser Val Val Met Glu Glu Met Lys Leu Val Asp Ser Lys His Gly
            420                 425                 430

Gln Leu Ile Lys Asn Phe Thr Ile Leu Gln Gly Pro Pro Gly Pro Arg
        435                 440                 445
```

```
Gly Pro Lys Gly Asp Arg Gly Ser Gln Gly Pro Pro Gly Pro Thr Gly
    450                 455                 460

Asn Lys Gly Gln Lys Gly Glu Lys Gly Glu Pro Gly Pro Pro Gly Pro
465                 470                 475                 480

Ala Gly Glu Arg Gly Thr Ile Gly Pro Val Gly Pro Pro Gly Glu Arg
                485                 490                 495

Gly Ser Lys Gly Ser Lys Gly Ser Gln Gly Pro Lys Gly Ser Arg Gly
            500                 505                 510

Ser Pro Gly Lys Pro Gly Pro Gln Gly Pro Ser Gly Asp Pro Gly Pro
        515                 520                 525

Pro Gly Pro Pro Gly Lys Asp Gly Leu Pro Gly Pro Gln Gly Pro Pro
    530                 535                 540

Gly Phe Gln Gly Leu Gln Gly Thr Val Gly Glu Pro Gly Val Pro Gly
545                 550                 555                 560

Pro Arg Gly Leu Pro Gly Leu Pro Gly Val Pro Gly Met Pro Gly Pro
                565                 570                 575

Lys Gly Pro Pro Gly Pro Pro Gly Pro Ser Gly Ala Met Glu Pro Leu
            580                 585                 590

Ala Leu Gln Asn Glu Pro Thr Pro Ala Ser Glu Val Asn Gly Cys Pro
        595                 600                 605

Pro His Trp Lys Asn Phe Thr Asp Lys Cys Tyr Tyr Phe Ser Leu Glu
    610                 615                 620

Lys Glu Ile Phe Glu Asp Ala Lys Leu Phe Cys Glu Asp Lys Ser Ser
625                 630                 635                 640

His Leu Val Phe Ile Asn Ser Arg Glu Glu Gln Gln Trp Ile Lys Lys
                645                 650                 655

His Thr Val Gly Arg Glu Ser His Trp Ile Gly Leu Thr Asp Ser Glu
            660                 665                 670

Gln Glu Ser Glu Trp Lys Trp Leu Asp Gly Ser Pro Val Asp Tyr Lys
```

675 680 685

Asn Trp Lys Ala Gly Gln Pro Asp Asn Trp Gly Ser Gly His Gly Pro
690 695 700

Gly Glu Asp Cys Ala Gly Leu Ile Tyr Ala Gly Gln Trp Asn Asp Phe
705 710 715 720

Gln Cys Asp Glu Ile Asn Asn Phe Ile Cys Glu Lys Glu Arg Glu Ala
725 730 735

Val Pro Ser Ser Ile Leu
740

<210> 49
<211> 251
<212> PRT
<213> Danio rerio

<400> 49

Met Ala Leu Leu Lys Leu Phe Leu Gly Ala Leu Leu Leu Leu Gln Leu
1 5 10 15

Val Leu Gln Leu Met Ala Gly Ala Ala Asp Pro Gln Ser Leu Asn Cys
20 25 30

Pro Ala Tyr Ala Gly Val Pro Gly Thr Pro Gly His Asn Gly Leu Pro
35 40 45

Gly Arg Asp Gly Arg Val Gly Arg Asp Gly Ala Asn Gly Pro Lys Gly
50 55 60

Glu Lys Gly Glu Pro Gly Val Asn Val Gln Gly Pro Pro Gly Lys Ala
65 70 75 80

Gly Pro Pro Gly Pro Ala Gly Ala Lys Gly Glu Arg Gly Pro Ser Gly
85 90 95

Leu Pro Gly Gln Asp Cys Met Ser Asp Ser Leu Lys Ser Glu Leu Gln
100 105 110

Lys Leu Ser Asp Lys Ile Ala Leu Ile Glu Lys Val Val Asn Phe Lys
115 120 125

```
Thr Phe Lys Lys Val Gly Gln Lys Tyr Tyr Val Thr Asp Asp Val Glu
    130                 135                 140

Glu Thr Phe Asp Lys Gly Met Gln Tyr Cys Ser Ser Asn Gly Gly Ala
145                 150                 155                 160

Leu Val Leu Pro Arg Thr Leu Glu Glu Asn Ala Leu Leu Lys Val Phe
                165                 170                 175

Val Ser Ser Ala Phe Lys Arg Leu Phe Ile Arg Ile Thr Asp Arg Glu
            180                 185                 190

Lys Glu Gly Glu Phe Val Asp Thr Asp Arg Lys Lys Leu Thr Phe Thr
        195                 200                 205

Asn Trp Gly Pro Asn Gln Pro Asp Asn Tyr Lys Gly Ala Gln Asp Cys
    210                 215                 220

Gly Ala Ile Ala Asp Ser Gly Leu Trp Asp Asp Val Ser Cys Asp Ser
225                 230                 235                 240

Leu Tyr Pro Ile Ile Cys Glu Ile Glu Ile Lys
                245                 250
```

<210> 50
<211> 742
<212> PRT
<213> Homo sapiens

<400> 50

```
Met Lys Asp Asp Phe Ala Glu Glu Glu Glu Val Gln Ser Phe Gly Tyr
1               5                   10                  15

Lys Arg Phe Gly Ile Gln Glu Gly Thr Gln Cys Thr Lys Cys Lys Asn
            20                  25                  30

Asn Trp Ala Leu Lys Phe Ser Ile Ile Leu Leu Tyr Ile Leu Cys Ala
        35                  40                  45

Leu Leu Thr Ile Thr Val Ala Ile Leu Gly Tyr Lys Val Val Glu Lys
    50                  55                  60

Met Asp Asn Val Thr Gly Gly Met Glu Thr Ser Arg Gln Thr Tyr Asp
65                  70                  75                  80
```

```
Asp Lys Leu Thr Ala Val Glu Ser Asp Leu Lys Lys Leu Gly Asp Gln
                85                  90                  95

Thr Gly Lys Lys Ala Ile Ser Thr Asn Ser Glu Leu Ser Thr Phe Arg
            100                 105                 110

Ser Asp Ile Leu Asp Leu Arg Gln Gln Leu Arg Glu Ile Thr Glu Lys
        115                 120                 125

Thr Ser Lys Asn Lys Asp Thr Leu Glu Lys Leu Gln Ala Ser Gly Asp
    130                 135                 140

Ala Leu Val Asp Arg Gln Ser Gln Leu Lys Glu Thr Leu Glu Asn Asn
145                 150                 155                 160

Ser Phe Leu Ile Thr Thr Val Asn Lys Thr Leu Gln Ala Tyr Asn Gly
                165                 170                 175

Tyr Val Thr Asn Leu Gln Gln Asp Thr Ser Val Leu Gln Gly Asn Leu
            180                 185                 190

Gln Asn Gln Met Tyr Ser His Asn Val Val Ile Met Asn Leu Asn Asn
        195                 200                 205

Leu Asn Leu Thr Gln Val Gln Gln Arg Asn Leu Ile Thr Asn Leu Gln
    210                 215                 220

Arg Ser Val Asp Asp Thr Ser Gln Ala Ile Gln Arg Ile Lys Asn Asp
225                 230                 235                 240

Phe Gln Asn Leu Gln Gln Val Phe Leu Gln Ala Lys Lys Asp Thr Asp
                245                 250                 255

Trp Leu Lys Glu Lys Val Gln Ser Leu Gln Thr Leu Ala Ala Asn Asn
            260                 265                 270

Ser Ala Leu Ala Lys Ala Asn Asn Asp Thr Leu Glu Asp Met Asn Ser
        275                 280                 285

Gln Leu Asn Ser Phe Thr Gly Gln Met Glu Asn Ile Thr Thr Ile Ser
    290                 295                 300

Gln Ala Asn Glu Gln Asn Leu Lys Asp Leu Gln Asp Leu His Lys Asp
```

305 310 315 320

Ala Glu Asn Arg Thr Ala Ile Lys Phe Asn Gln Leu Glu Glu Arg Phe
325 330 335

Gln Leu Phe Glu Thr Asp Ile Val Asn Ile Ile Ser Asn Ile Ser Tyr
340 345 350

Thr Ala His His Leu Arg Thr Leu Thr Ser Asn Leu Asn Glu Val Arg
355 360 365

Thr Thr Cys Thr Asp Thr Leu Thr Lys His Thr Asp Asp Leu Thr Ser
370 375 380

Leu Asn Asn Thr Leu Ala Asn Ile Arg Leu Asp Ser Val Ser Leu Arg
385 390 395 400

Met Gln Gln Asp Leu Met Arg Ser Arg Leu Asp Thr Glu Val Ala Asn
405 410 415

Leu Ser Val Ile Met Glu Glu Met Lys Leu Val Asp Ser Lys His Gly
420 425 430

Gln Leu Ile Lys Asn Phe Thr Ile Leu Gln Gly Pro Pro Gly Pro Arg
435 440 445

Gly Pro Arg Gly Asp Arg Gly Ser Gln Gly Pro Pro Gly Pro Thr Gly
450 455 460

Asn Lys Gly Gln Lys Gly Glu Lys Gly Glu Pro Gly Pro Pro Gly Pro
465 470 475 480

Ala Gly Glu Arg Gly Pro Ile Gly Pro Ala Gly Pro Pro Gly Glu Arg
485 490 495

Gly Gly Lys Gly Ser Lys Gly Ser Gln Gly Pro Lys Gly Ser Arg Gly
500 505 510

Ser Pro Gly Lys Pro Gly Pro Gln Gly Pro Ser Gly Asp Pro Gly Pro
515 520 525

Pro Gly Pro Pro Gly Lys Glu Gly Leu Pro Gly Pro Gln Gly Pro Pro
530 535 540

```
Gly Phe Gln Gly Leu Gln Gly Thr Val Gly Glu Pro Gly Val Pro Gly
545                 550                 555                 560

Pro Arg Gly Leu Pro Gly Leu Pro Gly Val Pro Gly Met Pro Gly Pro
                565                 570                 575

Lys Gly Pro Pro Gly Pro Pro Gly Pro Ser Gly Ala Val Val Pro Leu
            580                 585                 590

Ala Leu Gln Asn Glu Pro Thr Pro Ala Pro Glu Asp Asn Gly Cys Pro
        595                 600                 605

Pro His Trp Lys Asn Phe Thr Asp Lys Cys Tyr Tyr Phe Ser Val Glu
    610                 615                 620

Lys Glu Ile Phe Glu Asp Ala Lys Leu Phe Cys Glu Asp Lys Ser Ser
625                 630                 635                 640

His Leu Val Phe Ile Asn Thr Arg Glu Glu Gln Gln Trp Ile Lys Lys
                645                 650                 655

Gln Met Val Gly Arg Glu Ser His Trp Ile Gly Leu Thr Asp Ser Glu
            660                 665                 670

Arg Glu Asn Glu Trp Lys Trp Leu Asp Gly Thr Ser Pro Asp Tyr Lys
        675                 680                 685

Asn Trp Lys Ala Gly Gln Pro Asp Asn Trp Gly His Gly His Gly Pro
    690                 695                 700

Gly Glu Asp Cys Ala Gly Leu Ile Tyr Ala Gly Gln Trp Asn Asp Phe
705                 710                 715                 720

Gln Cys Glu Asp Val Asn Asn Phe Ile Cys Glu Lys Asp Arg Glu Thr
                725                 730                 735

Val Leu Ser Ser Ala Leu
            740
```

<210> 51
<211> 622
<212> PRT
<213> Homo sapiens

<400> 51

```
Met Lys Asp Asp Phe Ala Glu Glu Glu Glu Val Gln Ser Phe Gly Tyr
1               5                  10                  15

Lys Arg Phe Gly Ile Gln Glu Gly Thr Gln Cys Thr Lys Cys Lys Asn
            20                  25                  30

Asn Trp Ala Leu Lys Phe Ser Ile Ile Leu Leu Tyr Ile Leu Cys Ala
        35                  40                  45

Leu Leu Thr Ile Thr Val Ala Ile Leu Gly Tyr Lys Val Val Glu Lys
    50                  55                  60

Met Asp Asn Val Thr Gly Gly Met Glu Thr Ser Arg Gln Thr Tyr Asp
65                  70                  75                  80

Asp Lys Leu Thr Ala Val Glu Ser Asp Leu Lys Lys Leu Gly Asp Gln
                85                  90                  95

Thr Gly Lys Lys Ala Ile Ser Thr Asn Ser Glu Leu Ser Thr Phe Arg
            100                 105                 110

Ser Asp Ile Leu Asp Leu Arg Gln Gln Leu Arg Glu Ile Thr Glu Lys
        115                 120                 125

Thr Ser Lys Asn Lys Asp Thr Leu Glu Lys Leu Gln Ala Ser Gly Asp
    130                 135                 140

Ala Leu Val Asp Arg Gln Ser Gln Leu Lys Glu Thr Leu Glu Asn Asn
145                 150                 155                 160

Ser Phe Leu Ile Thr Thr Val Asn Lys Thr Leu Gln Ala Tyr Asn Gly
                165                 170                 175

Tyr Val Thr Asn Leu Gln Gln Asp Thr Ser Val Leu Gln Gly Asn Leu
            180                 185                 190

Gln Asn Gln Met Tyr Ser His Asn Val Val Ile Met Asn Leu Asn Asn
        195                 200                 205

Leu Asn Leu Thr Gln Val Gln Gln Arg Asn Leu Ile Thr Asn Leu Gln
    210                 215                 220
```

```
Arg Ser Val Asp Asp Thr Ser Gln Ala Ile Gln Arg Ile Lys Asn Asp
225                 230                 235                 240

Phe Gln Asn Leu Gln Gln Val Phe Leu Gln Ala Lys Lys Asp Thr Asp
                245                 250                 255

Trp Leu Lys Glu Lys Val Gln Ser Leu Gln Thr Leu Ala Ala Asn Asn
            260                 265                 270

Ser Ala Leu Ala Lys Ala Asn Asn Asp Thr Leu Glu Asp Met Asn Ser
        275                 280                 285

Gln Leu Asn Ser Phe Thr Gly Gln Met Glu Asn Ile Thr Thr Ile Ser
    290                 295                 300

Gln Ala Asn Glu Gln Asn Leu Lys Asp Leu Gln Asp Leu His Lys Asp
305                 310                 315                 320

Ala Glu Asn Arg Thr Ala Ile Lys Phe Asn Gln Leu Glu Glu Arg Phe
                325                 330                 335

Gln Leu Phe Glu Thr Asp Ile Val Asn Ile Ile Ser Asn Ile Ser Tyr
            340                 345                 350

Thr Ala His His Leu Arg Thr Leu Thr Ser Asn Leu Asn Glu Val Arg
        355                 360                 365

Thr Thr Cys Thr Asp Thr Leu Thr Lys His Thr Asp Asp Leu Thr Ser
    370                 375                 380

Leu Asn Asn Thr Leu Ala Asn Ile Arg Leu Asp Ser Val Ser Leu Arg
385                 390                 395                 400

Met Gln Gln Asp Leu Met Arg Ser Arg Leu Asp Thr Glu Val Ala Asn
                405                 410                 415

Leu Ser Val Ile Met Glu Glu Met Lys Leu Val Asp Ser Lys His Gly
            420                 425                 430

Gln Leu Ile Lys Asn Phe Thr Ile Leu Gln Gly Pro Pro Gly Pro Arg
        435                 440                 445

Gly Pro Arg Gly Asp Arg Gly Ser Gln Gly Pro Pro Gly Pro Thr Gly
    450                 455                 460
```

```
Asn Lys Gly Gln Lys Gly Glu Lys Gly Glu Pro Gly Pro Pro Gly Pro
465                 470                 475                 480

Ala Gly Glu Arg Gly Pro Ile Gly Pro Ala Gly Pro Pro Gly Glu Arg
                485                 490                 495

Gly Gly Lys Gly Ser Lys Gly Ser Gln Gly Pro Lys Gly Ser Arg Gly
            500                 505                 510

Ser Pro Gly Lys Pro Gly Pro Gln Gly Pro Ser Gly Asp Pro Gly Pro
        515                 520                 525

Pro Gly Pro Pro Gly Lys Glu Gly Leu Pro Gly Pro Gln Gly Pro Pro
    530                 535                 540

Gly Phe Gln Gly Leu Gln Gly Thr Val Gly Glu Pro Gly Val Pro Gly
545                 550                 555                 560

Pro Arg Gly Leu Pro Gly Leu Pro Gly Val Pro Gly Met Pro Gly Pro
                565                 570                 575

Lys Gly Pro Pro Gly Pro Pro Gly Pro Ser Gly Ala Val Val Pro Leu
            580                 585                 590

Ala Leu Gln Asn Glu Pro Thr Pro Ala Pro Glu Asp Asn Ser Lys Ser
        595                 600                 605

Lys Pro Ser Leu Gln Pro Gly Gly Gln Gly Ser Ala Cys Ala
    610                 615                 620
```

<210> 52
<211> 742
<212> PRT
<213> Mus musculus

<400> 52

```
Met Lys Asp Asp Phe Ala Glu Glu Glu Glu Val Gln Ser Phe Gly Tyr
1               5                   10                  15

Lys Arg Phe Gly Ile His Glu Gly Thr Gln Cys Thr Lys Cys Ile Asn
            20                  25                  30

Asn Trp Ala Leu Lys Phe Ser Ile Val Leu Leu Tyr Ile Leu Cys Ala
```

```
        35                  40                  45

Leu Leu Thr Ile Thr Val Ala Ile Leu Gly Tyr Lys Val Val Glu Lys
    50                  55                  60

Met Asp Asn Val Ser Asp Gly Met Glu Thr Ser His Gln Thr Tyr Asp
65                  70                  75                  80

Asn Lys Leu Thr Ala Val Glu Ser Asp Leu Lys Lys Leu Gly Asp Gln
                85                  90                  95

Ala Gly Lys Lys Ala Leu Ser Thr Asn Ser Glu Leu Ser Thr Phe Arg
            100                 105                 110

Ser Asp Ile Leu Asp Leu Arg Gln Gln Leu Gln Glu Ile Thr Glu Lys
        115                 120                 125

Thr Ser Lys Asn Lys Asp Thr Leu Glu Lys Leu Gln Ala Asn Gly Asp
    130                 135                 140

Ser Leu Val Asp Arg Gln Ser Gln Leu Lys Glu Thr Leu Gln Asn Asn
145                 150                 155                 160

Ser Phe Leu Ile Thr Thr Val Asn Lys Thr Leu Gln Ala Tyr Asn Gly
                165                 170                 175

Tyr Val Thr Asn Leu Gln Gln Asp Thr Asn Val Leu Gln Gly Asn Leu
            180                 185                 190

Gln Ser Gln Met Tyr Ser Gln Ser Val Val Ile Met Asn Leu Asn Asn
        195                 200                 205

Leu Asn Leu Thr Gln Val Gln Gln Arg Asn Leu Ile Ser Asn Leu Gln
    210                 215                 220

Gln Ser Val Asp Asp Thr Ser Leu Ala Ile Gln Arg Ile Lys Asn Asp
225                 230                 235                 240

Phe Gln Asn Leu Gln Gln Val Phe Leu Gln Ala Lys Lys Asp Thr Asp
                245                 250                 255

Trp Leu Lys Glu Lys Val Gln Ser Leu Gln Thr Leu Ala Ala Asn Asn
            260                 265                 270
```

```
Ser Ala Leu Ala Lys Ala Asn Asn Asp Thr Leu Glu Asp Met Asn Ser
        275                 280                 285

Gln Leu Ser Ser Phe Thr Gly Gln Met Asp Asn Ile Thr Thr Ile Ser
    290                 295                 300

Gln Ala Asn Glu Gln Ser Leu Lys Asp Leu Gln Asp Leu His Lys Asp
305                 310                 315                 320

Thr Glu Asn Arg Thr Ala Val Lys Phe Ser Gln Leu Glu Glu Arg Phe
                325                 330                 335

Gln Val Phe Glu Thr Asp Ile Val Asn Ile Ile Ser Asn Ile Ser Tyr
            340                 345                 350

Thr Ala His His Leu Arg Thr Leu Thr Ser Asn Leu Asn Asp Val Trp
        355                 360                 365

Thr Thr Cys Thr Asp Thr Leu Thr Arg His Thr Asp Asp Leu Thr Ser
    370                 375                 380

Leu Asn Asn Thr Leu Val Asn Ile Arg Leu Asp Ser Ile Ser Leu Arg
385                 390                 395                 400

Met Gln Gln Asp Met Met Arg Ser Lys Leu Asp Thr Glu Val Ala Asn
                405                 410                 415

Leu Ser Val Val Met Glu Glu Met Lys Leu Val Asp Ser Lys His Gly
            420                 425                 430

Gln Leu Ile Lys Asn Phe Thr Ile Leu Gln Gly Pro Pro Gly Pro Arg
        435                 440                 445

Gly Pro Lys Gly Asp Arg Gly Ser Gln Gly Pro Pro Gly Pro Thr Gly
    450                 455                 460

Asn Lys Gly Gln Lys Gly Glu Lys Gly Glu Pro Gly Pro Pro Gly Pro
465                 470                 475                 480

Ala Gly Glu Arg Gly Thr Ile Gly Pro Val Gly Pro Pro Gly Glu Arg
                485                 490                 495

Gly Ser Lys Gly Ser Lys Gly Ser Gln Gly Pro Lys Gly Ser Arg Gly
```

```
            500                 505                 510

Ser Pro Gly Lys Pro Gly Pro Gln Gly Pro Ser Gly Asp Pro Gly Pro
        515                 520                 525

Pro Gly Pro Pro Gly Lys Asp Gly Leu Pro Gly Pro Gln Gly Pro Pro
    530                 535                 540

Gly Phe Gln Gly Leu Gln Gly Thr Val Gly Glu Pro Gly Val Pro Gly
545                 550                 555                 560

Pro Arg Gly Leu Pro Gly Leu Pro Gly Val Pro Gly Met Pro Gly Pro
                565                 570                 575

Lys Gly Pro Pro Gly Pro Pro Gly Pro Ser Gly Ala Met Glu Pro Leu
            580                 585                 590

Ala Leu Gln Asn Glu Pro Thr Pro Ala Ser Glu Val Asn Gly Cys Pro
        595                 600                 605

Pro His Trp Lys Asn Phe Thr Asp Lys Cys Tyr Tyr Phe Ser Leu Glu
    610                 615                 620

Lys Glu Ile Leu Glu Asp Ala Lys Leu Phe Cys Glu Asp Lys Ser Ser
625                 630                 635                 640

His Leu Val Phe Ile Asn Ser Arg Glu Glu Gln Gln Trp Ile Lys Lys
                645                 650                 655

His Thr Val Gly Arg Glu Ser His Trp Ile Gly Leu Thr Asp Ser Glu
            660                 665                 670

Gln Glu Ser Glu Trp Lys Trp Leu Asp Gly Ser Pro Val Asp Tyr Lys
        675                 680                 685

Asn Trp Lys Ala Gly Gln Pro Asp Asn Trp Gly Ser Gly His Gly Pro
    690                 695                 700

Gly Glu Asp Cys Ala Gly Leu Ile Tyr Ala Gly Gln Trp Asn Asp Phe
705                 710                 715                 720

Gln Cys Asp Glu Ile Asn Asn Phe Ile Cys Glu Lys Glu Arg Glu Ala
                725                 730                 735
```

Val Pro Ser Ser Ile Leu
740

<210> 53
<211> 321
<212> PRT
<213> Bos taurus

<400> 53

Met Leu Pro Leu Pro Leu Ser Ile Leu Leu Leu Leu Thr Gln Ser Gln
1 5 10 15

Ser Phe Leu Gly Glu Glu Met Asp Val Tyr Ser Glu Lys Thr Leu Thr
20 25 30

Asp Pro Cys Thr Leu Val Val Cys Ala Pro Pro Ala Asp Ser Leu Arg
35 40 45

Gly His Asp Gly Arg Asp Gly Lys Glu Gly Pro Gln Gly Glu Lys Gly
50 55 60

Asp Pro Gly Pro Pro Gly Met Pro Gly Pro Ala Gly Arg Glu Gly Pro
65 70 75 80

Ser Gly Arg Gln Gly Ser Met Gly Pro Pro Gly Thr Pro Gly Pro Lys
85 90 95

Gly Glu Pro Gly Pro Glu Gly Gly Val Gly Ala Pro Gly Met Pro Gly
100 105 110

Ser Pro Gly Pro Ala Gly Leu Lys Gly Glu Arg Gly Thr Pro Gly Pro
115 120 125

Gly Gly Ala Ile Gly Pro Gln Gly Pro Ser Gly Ala Met Gly Pro Pro
130 135 140

Gly Leu Lys Gly Asp Arg Gly Asp Pro Gly Glu Lys Gly Ala Arg Gly
145 150 155 160

Glu Thr Ser Val Leu Glu Val Asp Thr Leu Arg Gln Arg Met Arg Asn
165 170 175

Leu Glu Gly Glu Val Gln Arg Leu Gln Asn Ile Val Thr Gln Tyr Arg
180 185 190

```
Lys Ala Val Leu Phe Pro Asp Gly Gln Ala Val Gly Glu Lys Ile Phe
        195                 200                 205

Lys Thr Ala Gly Ala Val Lys Ser Tyr Ser Asp Ala Glu Gln Leu Cys
    210                 215                 220

Arg Glu Ala Lys Gly Gln Leu Ala Ser Pro Arg Ser Ser Ala Glu Asn
225                 230                 235                 240

Glu Ala Val Thr Gln Leu Val Arg Ala Lys Asn Lys His Ala Tyr Leu
                245                 250                 255

Ser Met Asn Asp Ile Ser Lys Glu Gly Lys Phe Thr Tyr Pro Thr Gly
            260                 265                 270

Gly Ser Leu Asp Tyr Ser Asn Trp Ala Pro Gly Glu Pro Asn Asn Arg
        275                 280                 285

Ala Lys Asp Glu Gly Pro Glu Asn Cys Leu Glu Ile Tyr Ser Asp Gly
    290                 295                 300

Asn Trp Asn Asp Ile Glu Cys Arg Glu Glu Arg Leu Val Ile Cys Glu
305                 310                 315                 320

Phe
```

<210> 54
<211> 239
<212> PRT
<213> Mus musculus

<400> 54

```
Met Leu Leu Leu Pro Leu Leu Pro Val Leu Leu Cys Val Val Ser Val
1               5                   10                  15

Ser Ser Ser Gly Ser Gln Thr Cys Glu Asp Thr Leu Lys Thr Cys Ser
            20                  25                  30

Val Ile Ala Cys Gly Arg Asp Gly Arg Asp Gly Pro Lys Gly Glu Lys
        35                  40                  45

Gly Glu Pro Gly Gln Gly Leu Arg Gly Leu Gln Gly Pro Pro Gly Lys
```

```
    50                  55                  60

Leu Gly Pro Pro Gly Ser Val Gly Ser Pro Gly Ser Pro Gly Pro Lys
65                  70                  75                  80

Gly Gln Lys Gly Asp His Gly Asp Asn Arg Ala Ile Glu Glu Lys Leu
                85                  90                  95

Ala Asn Met Glu Ala Glu Ile Arg Ile Leu Lys Ser Lys Leu Gln Leu
            100                 105                 110

Thr Asn Lys Leu His Ala Phe Ser Met Gly Lys Lys Ser Gly Lys Lys
        115                 120                 125

Leu Phe Val Thr Asn His Glu Lys Met Pro Phe Ser Lys Val Lys Ser
    130                 135                 140

Leu Cys Thr Glu Leu Gln Gly Thr Val Ala Ile Pro Arg Asn Ala Glu
145                 150                 155                 160

Glu Asn Lys Ala Ile Gln Glu Val Ala Thr Gly Ile Ala Phe Leu Gly
                165                 170                 175

Ile Thr Asp Glu Ala Thr Glu Gly Gln Phe Met Tyr Val Thr Gly Gly
            180                 185                 190

Arg Leu Thr Tyr Ser Asn Trp Lys Lys Asp Glu Pro Asn Asn His Gly
        195                 200                 205

Ser Gly Glu Asp Cys Val Ile Ile Leu Asp Asn Gly Leu Trp Asn Asp
    210                 215                 220

Ile Ser Cys Gln Ala Ser Phe Lys Ala Val Cys Glu Phe Pro Ala
225                 230                 235


<210>  55
<211>  244
<212>  PRT
<213>  Mus musculus

<400>  55

Met Ser Ile Phe Thr Ser Phe Leu Leu Leu Cys Val Val Thr Val Val
1               5                   10                  15
```

```
Tyr Ala Glu Thr Leu Thr Glu Gly Val Gln Asn Ser Cys Pro Val Val
            20                  25                  30

Thr Cys Ser Ser Pro Gly Leu Asn Gly Phe Pro Gly Lys Asp Gly Arg
        35                  40                  45

Asp Gly Ala Lys Gly Glu Lys Gly Glu Pro Gly Gln Gly Leu Arg Gly
    50                  55                  60

Leu Gln Gly Pro Pro Gly Lys Val Gly Pro Thr Gly Pro Pro Gly Asn
65                  70                  75                  80

Pro Gly Leu Lys Gly Ala Val Gly Pro Lys Gly Asp Arg Gly Asp Arg
                85                  90                  95

Ala Glu Phe Asp Thr Ser Glu Ile Asp Ser Glu Ile Ala Ala Leu Arg
            100                 105                 110

Ser Glu Leu Arg Ala Leu Arg Asn Trp Val Leu Phe Ser Leu Ser Glu
        115                 120                 125

Lys Val Gly Lys Lys Tyr Phe Val Ser Ser Val Lys Lys Met Ser Leu
    130                 135                 140

Asp Arg Val Lys Ala Leu Cys Ser Glu Phe Gln Gly Ser Val Ala Thr
145                 150                 155                 160

Pro Arg Asn Ala Glu Glu Asn Ser Ala Ile Gln Lys Val Ala Lys Asp
                165                 170                 175

Ile Ala Tyr Leu Gly Ile Thr Asp Val Arg Val Glu Gly Ser Phe Glu
            180                 185                 190

Asp Leu Thr Gly Asn Arg Val Arg Tyr Thr Asn Trp Asn Asp Gly Glu
        195                 200                 205

Pro Asn Asn Thr Gly Asp Gly Glu Asp Cys Val Val Ile Leu Gly Asn
    210                 215                 220

Gly Lys Trp Asn Asp Val Pro Cys Ser Asp Ser Phe Leu Ala Ile Cys
225                 230                 235                 240

Glu Phe Ser Asp
```

<210> 56
<211> 277
<212> PRT
<213> Homo sapiens

<400> 56

Met Asn Gly Phe Ala Ser Leu Leu Arg Arg Asn Gln Phe Ile Leu Leu
1 5 10 15

Val Leu Phe Leu Leu Gln Ile Gln Ser Leu Gly Leu Asp Ile Asp Ser
20 25 30

Arg Pro Thr Ala Glu Val Cys Ala Thr His Thr Ile Ser Pro Gly Pro
35 40 45

Lys Gly Asp Asp Gly Glu Lys Gly Asp Pro Gly Glu Glu Gly Lys His
50 55 60

Gly Lys Val Gly Arg Met Gly Pro Lys Gly Ile Lys Gly Glu Leu Gly
65 70 75 80

Asp Met Gly Asp Arg Gly Asn Ile Gly Lys Thr Gly Pro Ile Gly Lys
85 90 95

Lys Gly Asp Lys Gly Glu Lys Gly Leu Leu Gly Ile Pro Gly Glu Lys
100 105 110

Gly Lys Ala Gly Thr Val Cys Asp Cys Gly Arg Tyr Arg Lys Phe Val
115 120 125

Gly Gln Leu Asp Ile Ser Ile Ala Arg Leu Lys Thr Ser Met Lys Phe
130 135 140

Val Lys Asn Val Ile Ala Gly Ile Arg Glu Thr Glu Glu Lys Phe Tyr
145 150 155 160

Tyr Ile Val Gln Glu Glu Lys Asn Tyr Arg Glu Ser Leu Thr His Cys
165 170 175

Arg Ile Arg Gly Gly Met Leu Ala Met Pro Lys Asp Glu Ala Ala Asn
180 185 190

Thr Leu Ile Ala Asp Tyr Val Ala Lys Ser Gly Phe Phe Arg Val Phe

```
        195                 200                 205

Ile Gly Val Asn Asp Leu Glu Arg Glu Gly Gln Tyr Met Phe Thr Asp
    210                 215                 220

Asn Thr Pro Leu Gln Asn Tyr Ser Asn Trp Asn Glu Gly Glu Pro Ser
225                 230                 235                 240

Asp Pro Tyr Gly His Glu Asp Cys Val Glu Met Leu Ser Ser Gly Arg
                245                 250                 255

Trp Asn Asp Thr Glu Cys His Leu Thr Met Tyr Phe Val Cys Glu Phe
            260                 265                 270

Ile Lys Lys Lys Lys
        275
```

<210> 57
<211> 742
<212> PRT
<213> Homo sapiens

<400> 57

```
Met Lys Asp Asp Phe Ala Glu Glu Glu Glu Val Gln Ser Phe Gly Tyr
1               5                   10                  15

Lys Arg Phe Gly Ile Gln Glu Gly Thr Gln Cys Thr Lys Cys Lys Asn
            20                  25                  30

Asn Trp Ala Leu Lys Phe Ser Ile Ile Leu Leu Tyr Ile Leu Cys Ala
        35                  40                  45

Leu Leu Thr Ile Thr Val Ala Ile Leu Gly Tyr Lys Val Val Glu Lys
    50                  55                  60

Met Asp Asn Val Thr Gly Gly Met Glu Thr Ser Arg Gln Thr Tyr Asp
65                  70                  75                  80

Asp Lys Leu Thr Ala Val Glu Ser Asp Leu Lys Lys Leu Gly Asp Gln
                85                  90                  95

Thr Gly Lys Lys Ala Ile Ser Thr Asn Ser Glu Leu Ser Thr Phe Arg
            100                 105                 110
```

```
Ser Asp Ile Leu Asp Leu Arg Gln Gln Leu Arg Glu Ile Thr Glu Lys
        115                 120                 125

Thr Ser Lys Asn Lys Asp Thr Leu Glu Lys Leu Gln Ala Ser Gly Asp
    130                 135                 140

Ala Leu Val Asp Arg Gln Ser Gln Leu Lys Glu Thr Leu Glu Asn Asn
145                 150                 155                 160

Ser Phe Leu Ile Thr Thr Val Asn Lys Thr Leu Gln Ala Tyr Asn Gly
                165                 170                 175

Tyr Val Thr Asn Leu Gln Gln Asp Thr Ser Val Leu Gln Gly Asn Leu
            180                 185                 190

Gln Asn Gln Met Tyr Ser His Asn Val Val Ile Met Asn Leu Asn Asn
        195                 200                 205

Leu Asn Leu Thr Gln Val Gln Gln Arg Asn Leu Ile Thr Asn Leu Gln
    210                 215                 220

Arg Ser Val Asp Asp Thr Ser Gln Ala Ile Gln Arg Ile Lys Asn Asp
225                 230                 235                 240

Phe Gln Asn Leu Gln Gln Val Phe Leu Gln Ala Lys Lys Asp Thr Asp
                245                 250                 255

Trp Leu Lys Glu Lys Val Gln Ser Leu Gln Thr Leu Ala Ala Asn Asn
            260                 265                 270

Ser Ala Leu Ala Lys Ala Asn Asn Asp Thr Leu Glu Asp Met Asn Ser
        275                 280                 285

Gln Leu Asn Ser Phe Thr Gly Gln Met Glu Asn Ile Thr Thr Ile Ser
    290                 295                 300

Gln Ala Asn Glu Gln Asn Leu Lys Asp Leu Gln Asp Leu His Lys Asp
305                 310                 315                 320

Ala Glu Asn Arg Thr Ala Ile Lys Phe Asn Gln Leu Glu Glu Arg Phe
                325                 330                 335

Gln Leu Phe Glu Thr Asp Ile Val Asn Ile Ile Ser Asn Ile Ser Tyr
            340                 345                 350
```

```
Thr Ala His His Leu Arg Thr Leu Thr Ser Asn Leu Asn Glu Val Arg
        355                 360                 365

Thr Thr Cys Thr Asp Thr Leu Thr Lys His Thr Asp Asp Leu Thr Ser
    370                 375                 380

Leu Asn Asn Thr Leu Ala Asn Ile Arg Leu Asp Ser Val Ser Leu Arg
385                 390                 395                 400

Met Gln Gln Asp Leu Met Arg Ser Arg Leu Asp Thr Glu Val Ala Asn
                405                 410                 415

Leu Ser Val Ile Met Glu Glu Met Lys Leu Val Asp Ser Lys His Gly
            420                 425                 430

Gln Leu Ile Lys Asn Phe Thr Ile Leu Gln Gly Pro Pro Gly Pro Arg
        435                 440                 445

Gly Pro Arg Gly Asp Arg Gly Ser Gln Gly Pro Pro Gly Pro Thr Gly
    450                 455                 460

Asn Lys Gly Gln Lys Gly Glu Lys Gly Glu Pro Gly Pro Pro Gly Pro
465                 470                 475                 480

Ala Gly Glu Arg Gly Pro Ile Gly Pro Ala Gly Pro Pro Gly Glu Arg
                485                 490                 495

Gly Gly Lys Gly Ser Lys Gly Ser Gln Gly Pro Lys Gly Ser Arg Gly
            500                 505                 510

Ser Pro Gly Lys Pro Gly Pro Gln Gly Pro Ser Gly Asp Pro Gly Pro
        515                 520                 525

Pro Gly Pro Pro Gly Lys Glu Gly Leu Pro Gly Pro Gln Gly Pro Pro
    530                 535                 540

Gly Phe Gln Gly Leu Gln Gly Thr Val Gly Glu Pro Gly Val Pro Gly
545                 550                 555                 560

Pro Arg Gly Leu Pro Gly Leu Pro Gly Val Pro Gly Met Pro Gly Pro
                565                 570                 575
```

```
Lys Gly Pro Pro Gly Pro Pro Gly Pro Ser Gly Ala Val Val Pro Leu
            580                 585                 590

Ala Leu Gln Asn Glu Pro Thr Pro Ala Pro Glu Asp Asn Gly Cys Pro
        595                 600                 605

Pro His Trp Lys Asn Phe Thr Asp Lys Cys Tyr Tyr Phe Ser Val Glu
    610                 615                 620

Lys Glu Ile Phe Glu Asp Ala Lys Leu Phe Cys Glu Asp Lys Ser Ser
625                 630                 635                 640

His Leu Val Phe Ile Asn Thr Arg Glu Glu Gln Gln Trp Ile Lys Lys
                645                 650                 655

Gln Met Val Gly Arg Glu Ser His Trp Ile Gly Leu Thr Asp Ser Glu
            660                 665                 670

Arg Glu Asn Glu Trp Lys Trp Leu Asp Gly Thr Ser Pro Asp Tyr Lys
        675                 680                 685

Asn Trp Lys Ala Gly Gln Pro Asp Asn Trp Gly His Gly His Gly Pro
    690                 695                 700

Gly Glu Asp Cys Ala Gly Leu Ile Tyr Ala Gly Gln Trp Asn Asp Phe
705                 710                 715                 720

Gln Cys Glu Asp Val Asn Asn Phe Ile Cys Glu Lys Asp Arg Glu Thr
                725                 730                 735

Val Leu Ser Ser Ala Leu
            740
```

<210> 58
<211> 246
<212> PRT
<213> Carassius auratus

<400> 58

```
Leu Leu Leu Leu Gln Phe Ala Leu Gln Leu Leu Asp Gly Ala Glu Pro
1               5                   10                  15

Gln Asn Leu Asn Cys Pro Ala Tyr Gly Gly Val Pro Gly Thr Pro Gly
            20                  25                  30
```

```
His Asn Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly Lys Asp Gly Ala
        35                  40                  45

Ile Gly Pro Lys Gly Glu Lys Gly Glu Ser Gly Val Ser Val Gln Gly
    50                  55                  60

Pro Pro Gly Lys Ala Gly Pro Pro Gly Thr Ala Gly Glu Lys Gly Glu
65                  70                  75                  80

Arg Gly Pro Ser Gly Pro Gln Gly Ser Pro Gly Ser Glu Ser Val Leu
                85                  90                  95

Glu Ser Leu Lys Ser Glu Ile Gln Gln Leu Lys Ala Lys Ile Ala Thr
            100                 105                 110

Phe Glu Lys Val Ser Ser Val Cys His Phe Arg Lys Val Gly Gln Lys
        115                 120                 125

Tyr Tyr Ile Thr Asp Gly Val Val Gly Asn Phe Asp Gln Gly Leu Lys
    130                 135                 140

Ser Cys Met Glu Phe Gly Gly Thr Met Val Ser Pro Arg Thr Ser Ala
145                 150                 155                 160

Glu Asn Gln Ala Leu Leu Lys Leu Val Val Ser Ser Gly Leu Gly Ser
                165                 170                 175

Lys Lys Pro Tyr Ile Gly Val Thr Asp Arg Lys Thr Glu Gly Gln Phe
            180                 185                 190

Val Asp Thr Glu Gly Lys Gln Leu Thr Phe Thr Asn Trp Gly Pro Gly
        195                 200                 205

Gln Pro Asp Asp Tyr Lys Gly Leu Gln Asp Cys Gly Val Ile Glu Asp
    210                 215                 220

Thr Gly Leu Trp Asp Asp Gly Gly Cys Gly Asp Ile Arg Pro Ile Met
225                 230                 235                 240

Cys Glu Ile Asp Ile Lys
                245
```

<210> 59

<211> 251
<212> PRT
<213> Danio rerio

<400> 59

```
Met Ala Leu Leu Lys Leu Phe Leu Gly Ala Leu Leu Leu Leu Gln Leu
1               5                  10                  15

Val Leu Gln Leu Met Ala Gly Ala Ala Asp Pro Gln Ser Leu Asn Cys
            20                  25                  30

Pro Ala Tyr Ala Gly Val Pro Gly Thr Pro Gly His Asn Gly Leu Pro
        35                  40                  45

Gly Arg Asp Gly Arg Val Gly Arg Asp Gly Ala Asn Gly Pro Lys Gly
    50                  55                  60

Glu Lys Gly Glu Pro Gly Val Asn Val Gln Gly Pro Pro Gly Lys Ala
65                  70                  75                  80

Gly Pro Pro Gly Pro Ala Gly Ala Lys Gly Glu Arg Gly Pro Ser Gly
                85                  90                  95

Leu Pro Gly Gln Asp Cys Met Ser Asp Ser Leu Lys Ser Glu Leu Gln
            100                 105                 110

Lys Leu Ser Asp Lys Ile Ala Leu Ile Glu Lys Val Val Asn Phe Lys
        115                 120                 125

Thr Phe Lys Lys Val Gly Gln Lys Tyr Tyr Val Thr Asp Asp Val Glu
    130                 135                 140

Glu Thr Phe Asp Lys Gly Met Gln Tyr Cys Ser Ser Asn Gly Gly Ala
145                 150                 155                 160

Leu Val Leu Pro Arg Thr Leu Glu Glu Asn Ala Leu Leu Lys Val Phe
                165                 170                 175

Val Ser Ser Ala Phe Lys Arg Leu Phe Ile Arg Ile Thr Asp Arg Glu
            180                 185                 190

Lys Glu Gly Glu Phe Val Asp Thr Asp Arg Lys Lys Leu Thr Phe Thr
        195                 200                 205
```

```
Asn Trp Gly Pro Asn Gln Pro Asp Asn Tyr Lys Gly Ala Gln Asp Cys
    210                 215                 220

Gly Ala Ile Ala Asp Ser Gly Leu Trp Asp Asp Val Ser Cys Asp Ser
225                 230                 235                 240

Leu Tyr Pro Ile Ile Cys Glu Ile Glu Ile Lys
                245                 250
```

<210> 60
<211> 256
<212> PRT
<213> Cyprinus carpio

<400> 60

```
Met Ala Leu Phe Lys Leu Phe Leu Gly Thr Leu Leu Leu Leu Gln Phe
1               5                   10                  15

Ala Leu Gln Leu Leu Asp Gly Ala Glu Pro Gln Asn Leu Asn Cys Pro
            20                  25                  30

Ala Tyr Gly Gly Val Pro Gly Thr Pro Gly His Asn Gly Leu Pro Gly
        35                  40                  45

Arg Asp Gly Arg Asp Gly Lys Asp Gly Ala Ile Gly Pro Lys Gly Glu
    50                  55                  60

Lys Gly Glu Ser Gly Val Ser Val Gln Gly Pro Pro Gly Lys Ala Gly
65                  70                  75                  80

Pro Pro Gly Pro Ala Gly Glu Lys Gly Glu Arg Gly Pro Thr Gly Ser
                85                  90                  95

Gln Gly Ser Pro Gly Ser Glu Ser Val Leu Glu Ser Leu Lys Ser Glu
            100                 105                 110

Ile Gln Gln Leu Lys Ala Lys Ile Ala Thr Phe Glu Lys Val Ala Ser
        115                 120                 125

Val Gly His Phe Arg Gln Val Gly Gln Lys Tyr Tyr Ile Thr Asp Gly
    130                 135                 140

Val Val Gly Thr Phe Asp Gln Gly Leu Lys Phe Cys Lys Asp Phe Gly
145                 150                 155                 160
```

```
Gly Thr Met Val Phe Pro Arg Thr Ser Ala Glu Asn Gln Ala Leu Leu
                165                 170                 175

Lys Leu Val Val Ser Ser Gly Leu Ser Ser Lys Lys Pro Tyr Ile Gly
            180                 185                 190

Val Thr Asp Arg Glu Thr Glu Gly Arg Phe Val Asn Thr Glu Gly Lys
        195                 200                 205

Gln Leu Thr Phe Thr Asn Trp Gly Pro Gly Gln Pro Asp Asp Tyr Lys
    210                 215                 220

Gly Leu Gln Asp Cys Gly Val Ile Glu Asp Ser Gly Leu Trp Asp Asp
225                 230                 235                 240

Gly Ser Cys Gly Asp Ile Arg Pro Ile Met Cys Glu Ile Asp Asn Lys
                245                 250                 255
```

<210> 61
<211> 222
<212> PRT
<213> Gallus gallus

<400> 61

```
Met Leu Ser Tyr Ser Phe Cys Met Ile Ala Ala Ala Val Ala Leu Leu
1               5                   10                  15

Thr Pro Cys His Ala Gln Asn Cys Ala Gly Ala Pro Glu Leu Pro Ser
            20                  25                  30

Ile Pro Gly Val Ser Gly Leu Leu Gly Leu Gly Ala Leu Lys Arg Tyr
        35                  40                  45

Phe Gly Ser Leu Leu Trp Pro Tyr Gly Glu Glu Lys Leu Pro Glu Cys
    50                  55                  60

Gln Trp Leu Gln Arg Gln Gln Asp Leu Ser Thr Ser Ser Asp Asp Glu
65                  70                  75                  80

Leu Gly Asn Val Leu Leu Asn Leu Arg Gln Arg Ile Leu Gln Leu Glu
                85                  90                  95

Gly Val Leu Ala Leu Asp Gly Lys Ile Thr Lys Val Gly Glu Lys Ile
            100                 105                 110
```

```
Phe Ala Ser Asn Gly Lys Glu Val Asn Phe Ser Ser Ala Leu Glu Ser
        115                 120                 125

Cys Glu Glu Thr Gly Gly Thr Leu Ala Thr Pro Met Asn Glu Glu Glu
    130                 135                 140

Asn Lys Ala Ile Met Gly Ile Val Lys Gln Tyr Asn Arg Tyr Ala Tyr
145                 150                 155                 160

Leu Gly Ile Lys Glu Ser Asp Thr Ala Gly Gln Phe Lys Tyr Val Asn
                165                 170                 175

Asn Gln Pro Leu Asn Tyr Thr Ser Trp Gln Gln Tyr Glu Pro Asn Gly
            180                 185                 190

Lys Gly Thr Glu Lys Cys Val Glu Met Tyr Thr Asp Gly Asn Trp Lys
        195                 200                 205

Asp Arg Lys Cys Asn Leu Tyr Arg Leu Thr Val Cys Glu Tyr
    210                 215                 220
```

<210> 62
<211> 371
<212> PRT
<213> Bos taurus

<400> 62

```
Met Leu Leu Leu Pro Leu Ser Val Leu Leu Leu Leu Thr Gln Pro Trp
1               5                   10                  15

Arg Ser Leu Gly Ala Glu Met Thr Thr Phe Ser Gln Lys Ile Leu Ala
            20                  25                  30

Asn Ala Cys Thr Leu Val Met Cys Ser Pro Leu Glu Ser Gly Leu Pro
        35                  40                  45

Gly His Asp Gly Gln Asp Gly Arg Glu Cys Pro His Gly Glu Lys Gly
    50                  55                  60

Asp Pro Gly Ser Pro Gly Pro Ala Gly Arg Ala Gly Arg Pro Gly Trp
65                  70                  75                  80

Val Gly Pro Ile Gly Pro Lys Gly Asp Asn Gly Phe Val Gly Glu Pro
```

```
                85                  90                  95

Gly Pro Lys Gly Asp Thr Gly Pro Arg Gly Pro Pro Gly Met Pro Gly
            100                 105                 110

Pro Ala Gly Arg Glu Gly Pro Ser Gly Lys Gln Gly Ser Met Gly Pro
        115                 120                 125

Pro Gly Thr Pro Gly Pro Lys Gly Glu Thr Gly Pro Lys Gly Gly Val
    130                 135                 140

Gly Ala Pro Gly Ile Gln Gly Phe Pro Gly Pro Ser Gly Leu Lys Gly
145                 150                 155                 160

Glu Lys Gly Ala Pro Gly Glu Thr Gly Ala Pro Gly Arg Ala Gly Val
                165                 170                 175

Thr Gly Pro Ser Gly Ala Ile Gly Pro Gln Gly Pro Ser Gly Ala Arg
            180                 185                 190

Gly Pro Pro Gly Leu Lys Gly Asp Arg Gly Asp Pro Gly Glu Thr Gly
        195                 200                 205

Ala Lys Gly Glu Ser Gly Leu Ala Glu Val Asn Ala Leu Lys Gln Arg
    210                 215                 220

Val Thr Ile Leu Asp Gly His Leu Arg Arg Phe Gln Asn Ala Phe Ser
225                 230                 235                 240

Gln Tyr Lys Lys Ala Val Leu Phe Pro Asp Gly Gln Ala Val Gly Glu
                245                 250                 255

Lys Ile Phe Lys Thr Ala Gly Ala Val Lys Ser Tyr Ser Asp Ala Glu
            260                 265                 270

Gln Leu Cys Arg Glu Ala Lys Gly Gln Leu Ala Ser Pro Arg Ser Ser
        275                 280                 285

Ala Glu Asn Glu Ala Val Thr Gln Met Val Arg Ala Gln Glu Lys Asn
    290                 295                 300

Ala Tyr Leu Ser Met Asn Asp Ile Ser Thr Glu Gly Arg Phe Thr Tyr
305                 310                 315                 320
```

```
Pro Thr Gly Glu Ile Leu Val Tyr Ser Asn Trp Ala Asp Gly Glu Pro
                325                 330                 335

Asn Asn Ser Asp Glu Gly Gln Pro Glu Asn Cys Val Glu Ile Phe Pro
            340                 345                 350

Asp Gly Lys Trp Asn Asp Val Pro Cys Ser Lys Gln Leu Leu Val Ile
        355                 360                 365

Cys Glu Phe
    370
```

<210> 63
<211> 30
<212> PRT
<213> Gallus gallus

<400> 63

```
Leu Leu Thr Cys Asp Lys Pro Glu Glu Lys Met Tyr Ser Cys Pro Ile
1               5                   10                  15

Ile Gln Cys Ser Ala Pro Ala Val Asn Gly Leu Pro Gly Asp
            20                  25                  30
```

<210> 64
<211> 301
<212> PRT
<213> Bos taurus

<400> 64

```
Glu Glu Met Asp Val Tyr Ser Glu Lys Thr Leu Thr Asp Pro Cys Thr
1               5                   10                  15

Leu Val Val Cys Ala Pro Pro Ala Asp Ser Leu Arg Gly His Asp Gly
            20                  25                  30

Arg Asp Gly Lys Glu Gly Pro Gln Gly Glu Lys Gly Asp Pro Gly Pro
        35                  40                  45

Pro Gly Met Pro Gly Pro Ala Gly Arg Glu Gly Pro Ser Gly Arg Gln
    50                  55                  60

Gly Ser Met Gly Pro Pro Gly Thr Pro Gly Pro Lys Gly Glu Pro Gly
65                  70                  75                  80
```

```
Pro Glu Gly Gly Val Gly Ala Pro Gly Met Pro Gly Ser Pro Gly Pro
                85                  90                  95

Ala Gly Leu Lys Gly Glu Arg Gly Ala Pro Gly Pro Gly Gly Ala Ile
            100                 105                 110

Gly Pro Gln Gly Pro Ser Gly Ala Met Gly Pro Pro Gly Leu Lys Gly
        115                 120                 125

Asp Arg Gly Asp Pro Gly Glu Lys Gly Ala Arg Gly Glu Thr Ser Val
    130                 135                 140

Leu Glu Val Asp Thr Leu Arg Gln Arg Met Arg Asn Leu Glu Gly Glu
145                 150                 155                 160

Val Gln Arg Leu Gln Asn Ile Val Thr Gln Tyr Arg Lys Ala Val Leu
                165                 170                 175

Phe Pro Asp Gly Gln Ala Val Gly Glu Lys Ile Phe Lys Thr Ala Gly
            180                 185                 190

Ala Val Lys Ser Tyr Ser Asp Ala Glu Gln Leu Cys Arg Glu Ala Lys
        195                 200                 205

Gly Gln Leu Ala Ser Pro Arg Ser Ser Ala Glu Asn Glu Ala Val Thr
    210                 215                 220

Gln Leu Val Arg Ala Lys Asn Lys His Ala Tyr Leu Ser Met Asn Asp
225                 230                 235                 240

Ile Ser Lys Glu Gly Lys Phe Thr Tyr Pro Thr Gly Gly Ser Leu Asp
                245                 250                 255

Tyr Ser Asn Trp Ala Pro Gly Glu Pro Asn Asn Arg Ala Lys Asp Glu
            260                 265                 270

Gly Pro Glu Asn Cys Leu Glu Ile Tyr Ser Asp Gly Asn Trp Asn Asp
        275                 280                 285

Ile Glu Cys Arg Glu Glu Arg Leu Val Ile Cys Glu Phe
    290                 295                 300
```

<210> 65

<211> 116
<212> PRT
<213> Sus scrofa

<400> 65

Ala Val Gly Glu Lys Val Phe Ser Thr Asn Gly Gln Ser Val Ala Phe
1 5 10 15

Asp Val Ile Arg Glu Leu Cys Ala Arg Ala Gly Gly Arg Ile Ala Ala
20 25 30

Pro Arg Ser Pro Glu Glu Asn Glu Ala Ile Ala Ser Ile Val Lys Lys
35 40 45

His Asn Thr Tyr Ala Tyr Leu Gly Leu Val Glu Gly Pro Thr Ala Gly
50 55 60

Asp Phe Phe Tyr Leu Asp Gly Thr Pro Val Asn Tyr Thr Asn Trp Tyr
65 70 75 80

Pro Gly Glu Pro Arg Gly Arg Gly Lys Glu Lys Cys Val Glu Met Tyr
85 90 95

Thr Asp Gly Gln Trp Asn Asp Arg Asn Cys Gln Gln Tyr Arg Leu Ala
100 105 110

Ile Cys Glu Phe
115

<210> 66
<211> 378
<212> PRT
<213> Sus scrofa

<400> 66

Met Leu Leu Leu Pro Leu Ser Val Leu Ile Leu Leu Thr Gln Pro Pro
1 5 10 15

Arg Ser Leu Gly Ala Glu Met Lys Thr Tyr Ser Gln Arg Ala Val Ala
20 25 30

Asn Ala Cys Ala Leu Val Met Cys Ser Pro Met Glu Asn Gly Leu Pro
35 40 45

Gly Arg Asp Gly Arg Asp Gly Arg Glu Gly Pro Arg Gly Glu Lys Gly

```
    50                  55                  60

Asp Pro Gly Leu Pro Gly Ala Val Gly Arg Ala Gly Met Pro Gly Leu
65                  70                  75                  80

Ala Gly Pro Val Gly Pro Lys Gly Asp Asn Gly Ser Thr Gly Glu Pro
                85                  90                  95

Gly Ala Lys Gly Asp Ile Gly Pro Cys Gly Pro Pro Gly Pro Pro Gly
            100                 105                 110

Ile Pro Gly Pro Ala Gly Lys Glu Gly Pro Ser Gly Gln Gln Gly Asn
        115                 120                 125

Ile Gly Pro Pro Gly Thr Pro Gly Pro Lys Gly Glu Thr Gly Pro Lys
    130                 135                 140

Gly Glu Val Gly Ala Leu Gly Met Gln Gly Ser Thr Gly Ala Arg Gly
145                 150                 155                 160

Pro Ala Gly Leu Lys Gly Glu Arg Gly Ala Pro Gly Glu Arg Gly Ala
                165                 170                 175

Pro Gly Ser Ala Gly Ala Ala Gly Pro Ala Gly Ala Thr Gly Pro Gln
            180                 185                 190

Gly Pro Ser Gly Ala Arg Gly Pro Pro Gly Leu Lys Gly Asp Arg Gly
        195                 200                 205

Pro Pro Gly Glu Arg Gly Ala Lys Gly Glu Ser Gly Leu Pro Gly Ile
    210                 215                 220

Thr Ala Leu Arg Gln Gln Val Glu Thr Leu Gln Gly Gln Val Gln Arg
225                 230                 235                 240

Leu Gln Lys Ala Phe Ser Gln Tyr Lys Lys Val Glu Leu Phe Pro Asn
                245                 250                 255

Gly Arg Gly Val Gly Glu Lys Ile Phe Lys Thr Gly Gly Phe Glu Lys
            260                 265                 270

Thr Phe Gln Asp Ala Gln Gln Val Cys Thr Gln Ala Gly Gly Gln Met
        275                 280                 285
```

```
Ala Ser Pro Arg Ser Glu Thr Glu Asn Glu Ala Leu Ser Gln Leu Val
    290                 295                 300

Thr Ala Gln Asn Lys Ala Ala Phe Leu Ser Met Thr Asp Ile Lys Thr
305                 310                 315                 320

Glu Gly Asn Phe Thr Tyr Pro Thr Gly Glu Pro Leu Val Tyr Ala Asn
                325                 330                 335

Trp Ala Pro Gly Glu Pro Asn Asn Asn Gly Gly Ser Ser Gly Ala Glu
            340                 345                 350

Asn Cys Val Glu Ile Phe Pro Asn Gly Lys Trp Asn Asp Lys Ala Cys
        355                 360                 365

Gly Glu Leu Arg Leu Val Ile Cys Glu Phe
    370                 375
```

<210> 67
<211> 244
<212> PRT
<213> Mus musculus

<400> 67

```
Met Ser Ile Phe Thr Ser Phe Leu Leu Leu Cys Val Val Thr Val Val
1               5                   10                  15

Tyr Ala Glu Thr Leu Thr Glu Gly Val Gln Asn Ser Cys Pro Val Val
            20                  25                  30

Thr Cys Ser Ser Pro Gly Leu Asn Gly Phe Pro Gly Lys Asp Gly Arg
        35                  40                  45

Asp Gly Ala Lys Gly Glu Lys Gly Glu Pro Gly Gln Gly Leu Arg Gly
    50                  55                  60

Leu Gln Gly Pro Pro Gly Lys Val Gly Pro Thr Gly Pro Pro Gly Asn
65                  70                  75                  80

Pro Gly Leu Lys Gly Ala Val Gly Pro Lys Gly Asp Arg Gly Asp Arg
                85                  90                  95

Ala Glu Phe Asp Thr Ser Glu Ile Asp Ser Glu Ile Ala Ala Leu Arg
            100                 105                 110
```

```
Ser Glu Leu Arg Ala Leu Arg Asn Trp Val Leu Phe Ser Leu Ser Glu
        115                 120                 125

Lys Val Gly Lys Lys Tyr Phe Val Ser Ser Val Lys Lys Met Ser Leu
    130                 135                 140

Asp Arg Val Lys Ala Leu Cys Ser Glu Phe Gln Gly Ser Val Ala Thr
145                 150                 155                 160

Pro Arg Asn Ala Glu Glu Asn Ser Ala Ile Gln Lys Val Ala Lys Asp
                165                 170                 175

Ile Ala Tyr Leu Gly Ile Thr Asp Val Arg Val Glu Gly Ser Phe Glu
            180                 185                 190

Asp Leu Thr Gly Asn Arg Val Arg Tyr Thr Asn Trp Asn Asp Gly Glu
        195                 200                 205

Pro Asn Asn Thr Gly Asp Gly Glu Asp Cys Val Val Ile Leu Gly Asn
    210                 215                 220

Gly Lys Trp Asn Asp Val Pro Cys Ser Asp Ser Phe Leu Ala Ile Cys
225                 230                 235                 240

Glu Phe Ser Asp
```

<210> 68
<211> 239
<212> PRT
<213> Mus musculus

<400> 68

```
Met Leu Leu Leu Pro Leu Leu Pro Val Leu Leu Cys Val Val Ser Val
1               5                   10                  15

Ser Ser Ser Gly Ser Gln Thr Cys Glu Asp Thr Leu Lys Thr Cys Ser
            20                  25                  30

Val Ile Ala Cys Gly Arg Asp Gly Arg Asp Gly Pro Lys Gly Glu Lys
        35                  40                  45

Gly Glu Pro Gly Gln Gly Leu Arg Gly Leu Gln Gly Pro Pro Gly Lys
```

```
    50                  55                  60

Leu Gly Pro Pro Gly Ser Val Gly Ser Pro Gly Ser Pro Gly Pro Lys
65                  70                  75                  80

Gly Gln Lys Gly Asp His Gly Asp Asn Arg Ala Ile Glu Glu Lys Leu
                85                  90                  95

Ala Asn Met Glu Ala Glu Ile Arg Ile Leu Lys Ser Lys Leu Gln Leu
            100                 105                 110

Thr Asn Lys Leu His Ala Phe Ser Met Gly Lys Lys Ser Gly Lys Lys
        115                 120                 125

Leu Phe Val Thr Asn His Glu Lys Met Pro Phe Ser Lys Val Lys Ser
    130                 135                 140

Leu Cys Thr Glu Leu Gln Gly Thr Val Ala Ile Pro Arg Asn Ala Glu
145                 150                 155                 160

Glu Asn Lys Ala Ile Gln Glu Val Ala Thr Gly Ile Ala Phe Leu Gly
                165                 170                 175

Ile Thr Asp Glu Ala Thr Glu Gly Gln Phe Met Tyr Val Thr Gly Gly
            180                 185                 190

Arg Leu Thr Tyr Ser Asn Trp Lys Lys Asp Glu Pro Asn Asn His Gly
        195                 200                 205

Ser Gly Glu Asp Cys Val Ile Ile Leu Asp Asn Gly Leu Trp Asn Asp
    210                 215                 220

Ile Ser Cys Gln Ala Ser Phe Lys Ala Val Cys Glu Phe Pro Ala
225                 230                 235


<210>  69
<211>  301
<212>  PRT
<213>  Bos taurus

<400>  69

Glu Glu Met Asp Val Tyr Ser Glu Lys Thr Leu Thr Asp Pro Cys Thr
1               5                   10                  15
```

```
Leu Val Val Cys Ala Pro Pro Ala Asp Ser Leu Arg Gly His Asp Gly
            20                  25                  30

Arg Asp Gly Lys Glu Gly Pro Gln Gly Glu Lys Gly Asp Pro Gly Pro
        35                  40                  45

Pro Gly Met Pro Gly Pro Ala Gly Arg Glu Gly Pro Ser Gly Arg Gln
    50                  55                  60

Gly Ser Met Gly Pro Pro Gly Thr Pro Gly Pro Lys Gly Glu Pro Gly
65                  70                  75                  80

Pro Glu Gly Gly Val Gly Ala Pro Gly Met Pro Gly Ser Pro Gly Pro
                85                  90                  95

Ala Gly Leu Lys Gly Glu Arg Gly Ala Pro Gly Pro Gly Gly Ala Ile
            100                 105                 110

Gly Pro Gln Gly Pro Ser Gly Ala Met Gly Pro Pro Gly Leu Lys Gly
        115                 120                 125

Asp Arg Gly Asp Pro Gly Glu Lys Gly Ala Arg Gly Glu Thr Ser Val
    130                 135                 140

Leu Glu Val Asp Thr Leu Arg Gln Arg Met Arg Asn Leu Glu Gly Glu
145                 150                 155                 160

Val Gln Arg Leu Gln Asn Ile Val Thr Gln Tyr Arg Lys Ala Val Leu
                165                 170                 175

Phe Pro Asp Gly Gln Ala Val Gly Glu Lys Ile Phe Lys Thr Ala Gly
            180                 185                 190

Ala Val Lys Ser Tyr Ser Asp Ala Glu Gln Leu Cys Arg Glu Ala Lys
        195                 200                 205

Gly Gln Leu Ala Ser Pro Arg Ser Ser Ala Glu Asn Glu Ala Val Thr
    210                 215                 220

Gln Leu Val Arg Ala Lys Asn Lys His Ala Tyr Leu Ser Met Asn Asp
225                 230                 235                 240

Ile Ser Lys Glu Gly Lys Phe Thr Tyr Pro Thr Gly Gly Ser Leu Asp
                245                 250                 255
```

```
Tyr Ser Asn Trp Ala Pro Gly Glu Pro Gly Asn Arg Ala Lys Asp Glu
            260                 265                 270

Gly Pro Glu Asn Cys Leu Glu Ile Tyr Ser Asp Gly Asn Trp Asn Asp
        275                 280                 285

Ile Glu Cys Arg Glu Glu Arg Leu Val Ile Cys Glu Phe
    290                 295                 300
```

<210> 70
<211> 2412
<212> PRT
<213> Homo sapiens

<400> 70

```
Met Gly Ile Ser Thr Val Ile Leu Glu Met Cys Leu Leu Trp Gly Gln
1               5                   10                  15

Val Leu Ser Thr Gly Gly Trp Ile Pro Arg Thr Thr Asp Tyr Ala Ser
            20                  25                  30

Leu Ile Pro Ser Glu Val Pro Leu Asp Thr Thr Val Ala Glu Gly Ser
        35                  40                  45

Pro Phe Pro Ser Glu Leu Thr Leu Glu Ser Thr Val Ala Glu Gly Ser
    50                  55                  60

Pro Ile Ser Leu Glu Ser Thr Leu Glu Thr Thr Val Ala Glu Gly Ser
65                  70                  75                  80

Leu Ile Pro Ser Glu Ser Thr Leu Glu Ser Thr Val Ala Glu Gly Ser
                85                  90                  95

Asp Ser Gly Leu Ala Leu Arg Leu Val Asn Gly Asp Gly Arg Cys Gln
            100                 105                 110

Gly Arg Val Glu Ile Leu Tyr Arg Gly Ser Trp Gly Ala Val Cys Asp
        115                 120                 125

Asp Ser Trp Asp Thr Asn Asp Ala Asn Val Val Cys Arg Gln Leu Gly
    130                 135                 140

Cys Gly Trp Ala Met Ser Ala Pro Gly Asn Ala Trp Phe Gly Gln Gly
```

```
145                 150                 155                 160

Ser Gly Pro Ile Ala Leu Asp Asp Val Arg Cys Ser Gly His Glu Ser
                165                 170                 175

Tyr Leu Trp Ser Cys Pro His Asn Gly Trp Leu Ser His Asn Cys Gly
            180                 185                 190

His Gly Glu Asp Ala Gly Val Ile Cys Ser Ala Ala Gln Pro Gln Ser
        195                 200                 205

Thr Leu Arg Pro Glu Ser Trp Pro Val Arg Ile Ser Pro Pro Val Pro
    210                 215                 220

Thr Glu Gly Ser Glu Ser Ser Leu Ala Leu Arg Leu Val Asn Gly Gly
225                 230                 235                 240

Asp Arg Cys Arg Gly Arg Val Glu Val Leu Tyr Arg Gly Ser Trp Gly
                245                 250                 255

Thr Val Cys Asp Asp Tyr Trp Asp Thr Asn Asp Ala Asn Val Val Cys
            260                 265                 270

Arg Gln Leu Gly Cys Gly Trp Ala Met Ser Ala Pro Gly Asn Ala Gln
        275                 280                 285

Phe Gly Gln Gly Ser Gly Pro Ile Val Leu Asp Asp Val Arg Cys Ser
    290                 295                 300

Gly His Glu Ser Tyr Leu Trp Ser Cys Pro His Asn Gly Trp Leu Thr
305                 310                 315                 320

His Asn Cys Gly His Ser Glu Asp Ala Gly Val Ile Cys Ser Ala Pro
                325                 330                 335

Gln Ser Arg Pro Thr Pro Ser Pro Asp Thr Trp Pro Thr Ser His Ala
            340                 345                 350

Ser Thr Ala Gly Pro Glu Ser Ser Leu Ala Leu Arg Leu Val Asn Gly
        355                 360                 365

Gly Asp Arg Cys Gln Gly Arg Val Glu Val Leu Tyr Arg Gly Ser Trp
    370                 375                 380
```

```
Gly Thr Val Cys Asp Asp Ser Trp Asp Thr Ser Asp Ala Asn Val Val
385                 390                 395                 400

Cys Arg Gln Leu Gly Cys Gly Trp Ala Thr Ser Ala Pro Gly Asn Ala
                405                 410                 415

Arg Phe Gly Gln Gly Ser Gly Pro Ile Val Leu Asp Asp Val Arg Cys
            420                 425                 430

Ser Gly Tyr Glu Ser Tyr Leu Trp Ser Cys Pro His Asn Gly Trp Leu
        435                 440                 445

Ser His Asn Cys Gln His Ser Glu Asp Ala Gly Val Ile Cys Ser Ala
    450                 455                 460

Ala His Ser Trp Ser Thr Pro Ser Pro Asp Thr Leu Pro Thr Ile Thr
465                 470                 475                 480

Leu Pro Ala Ser Thr Val Gly Ser Glu Ser Ser Leu Ala Leu Arg Leu
                485                 490                 495

Val Asn Gly Gly Asp Arg Cys Gln Gly Arg Val Glu Val Leu Tyr Arg
            500                 505                 510

Gly Ser Trp Gly Thr Val Cys Asp Asp Ser Trp Asp Thr Asn Asp Ala
        515                 520                 525

Asn Val Val Cys Arg Gln Leu Gly Cys Gly Trp Ala Met Leu Ala Pro
    530                 535                 540

Gly Asn Ala Arg Phe Gly Gln Gly Ser Gly Pro Ile Val Leu Asp Asp
545                 550                 555                 560

Val Arg Cys Ser Gly Asn Glu Ser Tyr Leu Trp Ser Cys Pro His Asn
                565                 570                 575

Gly Trp Leu Ser His Asn Cys Gly His Ser Glu Asp Ala Gly Val Ile
            580                 585                 590

Cys Ser Gly Pro Glu Ser Ser Leu Ala Leu Arg Leu Val Asn Gly Gly
        595                 600                 605

Asp Arg Cys Gln Gly Arg Val Glu Val Leu Tyr Arg Gly Ser Trp Gly
```

```
    610                 615                 620

Thr Val Cys Asp Asp Ser Trp Asp Thr Asn Asp Ala Asn Val Val Cys
625                 630                 635                 640

Arg Gln Leu Gly Cys Gly Trp Ala Met Ser Ala Pro Gly Asn Ala Arg
                645                 650                 655

Phe Gly Gln Gly Ser Gly Pro Ile Val Leu Asp Asp Val Arg Cys Ser
            660                 665                 670

Gly His Glu Ser Tyr Leu Trp Ser Cys Pro Asn Asn Gly Trp Leu Ser
        675                 680                 685

His Asn Cys Gly His His Glu Asp Ala Gly Val Ile Cys Ser Ala Ala
    690                 695                 700

Gln Ser Arg Ser Thr Pro Arg Pro Asp Thr Leu Ser Thr Ile Thr Leu
705                 710                 715                 720

Pro Pro Ser Thr Val Gly Ser Glu Ser Ser Leu Thr Leu Arg Leu Val
                725                 730                 735

Asn Gly Ser Asp Arg Cys Gln Gly Arg Val Glu Val Leu Tyr Arg Gly
            740                 745                 750

Ser Trp Gly Thr Val Cys Asp Asp Ser Trp Asp Thr Asn Asp Ala Asn
        755                 760                 765

Val Val Cys Arg Gln Leu Gly Cys Gly Trp Ala Thr Ser Ala Pro Gly
    770                 775                 780

Asn Ala Arg Phe Gly Gln Gly Ser Gly Pro Ile Val Leu Asp Asp Val
785                 790                 795                 800

Arg Cys Ser Gly His Glu Ser Tyr Leu Trp Ser Cys Pro His Asn Gly
                805                 810                 815

Trp Leu Ser His Asn Cys Gly His His Glu Asp Ala Gly Val Ile Cys
            820                 825                 830

Ser Val Ser Gln Ser Arg Pro Thr Pro Ser Pro Asp Thr Trp Pro Thr
        835                 840                 845
```

```
Ser His Ala Ser Thr Ala Gly Pro Glu Ser Ser Leu Ala Leu Arg Leu
    850                 855                 860

Val Asn Gly Gly Asp Arg Cys Gln Gly Arg Val Glu Val Leu Tyr Arg
865                 870                 875                 880

Gly Ser Trp Gly Thr Val Cys Asp Asp Ser Trp Asp Thr Ser Asp Ala
                885                 890                 895

Asn Val Val Cys Arg Gln Leu Gly Cys Gly Trp Ala Thr Ser Ala Pro
            900                 905                 910

Gly Asn Ala Arg Phe Gly Gln Gly Ser Gly Pro Ile Val Leu Asp Asp
        915                 920                 925

Val Arg Cys Ser Gly Tyr Glu Ser Tyr Leu Trp Ser Cys Pro His Asn
    930                 935                 940

Gly Trp Leu Ser His Asn Cys Gln His Ser Glu Asp Ala Gly Val Ile
945                 950                 955                 960

Cys Ser Ala Ala His Ser Trp Ser Thr Pro Ser Pro Asp Thr Leu Pro
                965                 970                 975

Thr Ile Thr Leu Pro Ala Ser Thr Val Gly Ser Glu Ser Ser Leu Ala
            980                 985                 990

Leu Arg Leu Val Asn Gly Gly Asp  Arg Cys Gln Gly Arg  Val Glu Val
        995                 1000                1005

Leu Tyr  Gln Gly Ser Trp Gly  Thr Val Cys Asp Asp  Ser Trp Asp
    1010                1015                1020

Thr Asn  Asp Ala Asn Val Val  Cys Arg Gln Leu Gly  Cys Gly Trp
    1025                1030                1035

Ala Met  Ser Ala Pro Gly Asn  Ala Arg Phe Gly Gln  Gly Ser Gly
    1040                1045                1050

Pro Ile  Val Leu Asp Asp Ala  Arg Cys Ser Gly His  Glu Ser Tyr
    1055                1060                1065

Leu Trp  Ser Cys Pro His Asn  Gly Trp Leu Ser His  Asn Cys Gly
```

```
    1070                1075                1080

His Ser  Glu Asp Ala Gly Val  Ile Cys Ser Ala Ser  Gln Ser Arg
    1085                1090                1095

Pro Thr  Pro Ser Pro Asp Thr  Trp Pro Thr Ser His  Ala Ser Thr
    1100                1105                1110

Ala Gly  Ser Glu Ser Ser Leu  Ala Leu Arg Leu Val  Asn Gly Gly
    1115                1120                1125

Asp Arg  Cys Gln Gly Arg Val  Glu Val Leu Tyr Arg  Gly Ser Trp
    1130                1135                1140

Gly Thr  Val Cys Asp Asp Tyr  Trp Asp Thr Asn Asp  Ala Asn Val
    1145                1150                1155

Ala Cys  Arg Gln Leu Gly Cys  Gly Trp Ala Met Ser  Ala Pro Gly
    1160                1165                1170

Asn Ala  Arg Phe Gly Gln Gly  Ser Gly Pro Ile Val  Leu Asp Asp
    1175                1180                1185

Val Arg  Cys Ser Gly His Glu  Ser Tyr Leu Trp Ser  Cys Pro His
    1190                1195                1200

Asn Gly  Trp Leu Ser His Asn  Cys Gly His His Glu  Asp Ala Gly
    1205                1210                1215

Val Ile  Cys Ser Ala Ser Gln  Ser Gln Pro Thr Pro  Ser Pro Asp
    1220                1225                1230

Thr Trp  Pro Thr Ser His Ala  Ser Thr Ala Gly Ser  Glu Ser Ser
    1235                1240                1245

Leu Ala  Leu Arg Leu Val Asn  Gly Gly Asp Arg Cys  Gln Gly Arg
    1250                1255                1260

Val Glu  Val Leu Tyr Arg Gly  Ser Trp Gly Thr Val  Cys Asp Asp
    1265                1270                1275

Tyr Trp  Asp Thr Asn Asp Ala  Asn Val Val Cys Arg  Gln Leu Gly
    1280                1285                1290
```

```
Cys Gly  Trp Ala Thr Ser Ala  Pro Gly Asn Ala Arg  Phe Gly Gln
    1295                 1300                 1305

Gly Ser  Gly Pro Ile Val Leu  Asp Asp Val Arg Cys  Ser Gly His
    1310                 1315                 1320

Glu Ser  Tyr Leu Trp Ser Cys  Pro His Asn Gly Trp  Leu Ser His
    1325                 1330                 1335

Asn Cys  Gly His His Glu Asp  Ala Gly Val Ile Cys  Ser Ala Ser
    1340                 1345                 1350

Gln Ser  Gln Pro Thr Pro Ser  Pro Asp Thr Trp Pro  Thr Ser His
    1355                 1360                 1365

Ala Ser  Thr Ala Gly Ser Glu  Ser Ser Leu Ala Leu  Arg Leu Val
    1370                 1375                 1380

Asn Gly  Gly Asp Arg Cys Gln  Gly Arg Val Glu Val  Leu Tyr Arg
    1385                 1390                 1395

Gly Ser  Trp Gly Thr Val Cys  Asp Asp Tyr Trp Asp  Thr Asn Asp
    1400                 1405                 1410

Ala Asn  Val Val Cys Arg Gln  Leu Gly Cys Gly Trp  Ala Thr Ser
    1415                 1420                 1425

Ala Pro  Gly Asn Ala Arg Phe  Gly Gln Gly Ser Gly  Pro Ile Val
    1430                 1435                 1440

Leu Asp  Asp Val Arg Cys Ser  Gly His Glu Ser Tyr  Leu Trp Ser
    1445                 1450                 1455

Cys Pro  His Asn Gly Trp Leu  Ser His Asn Cys Gly  His His Glu
    1460                 1465                 1470

Asp Ala  Gly Val Ile Cys Ser  Ala Phe Gln Ser Gln  Pro Thr Pro
    1475                 1480                 1485

Ser Pro  Asp Thr Trp Pro Thr  Ser Arg Ala Ser Thr  Ala Gly Ser
    1490                 1495                 1500

Glu Ser  Thr Leu Ala Leu Arg  Leu Val Asn Gly Gly  Asp Arg Cys
```

```
    1505                1510                1515

Arg Gly  Arg Val Glu Val Leu  Tyr Gln Gly Ser Trp  Gly Thr Val
    1520                1525                1530

Cys Asp  Asp Tyr Trp Asp Thr  Asn Asp Ala Asn Val  Val Cys Arg
    1535                1540                1545

Gln Leu  Gly Cys Gly Trp Ala  Met Ser Ala Pro Gly  Asn Ala Gln
    1550                1555                1560

Phe Gly  Gln Gly Ser Gly Pro  Ile Val Leu Asp Asp  Val Arg Cys
    1565                1570                1575

Ser Gly  His Glu Pro Tyr Leu  Trp Ser Cys Pro His  Asn Gly Trp
    1580                1585                1590

Leu Ser  His Asn Cys Gly His  His Glu Asp Ala Gly  Val Ile Cys
    1595                1600                1605

Ser Ala  Ala Gln Ser Gln Ser  Thr Pro Arg Pro Asp  Thr Trp Leu
    1610                1615                1620

Thr Thr  Asn Leu Pro Ala Leu  Thr Val Gly Ser Glu  Ser Ser Leu
    1625                1630                1635

Ala Leu  Arg Leu Val Asn Gly  Gly Asp Arg Cys Arg  Gly Arg Val
    1640                1645                1650

Glu Val  Leu Tyr Arg Gly Ser  Trp Gly Thr Val Cys  Asp Asp Ser
    1655                1660                1665

Trp Asp  Thr Asn Asp Ala Asn  Val Val Cys Arg Gln  Leu Gly Cys
    1670                1675                1680

Gly Trp  Ala Met Ser Ala Pro  Gly Asn Ala Arg Phe  Gly Gln Gly
    1685                1690                1695

Ser Gly  Pro Ile Val Leu Gly  Asp Val Arg Cys Ser  Gly Asn Glu
    1700                1705                1710

Ser Tyr  Leu Trp Ser Cys Pro  His Lys Gly Trp Leu  Thr His Asn
    1715                1720                1725
```

```
Cys Gly  His His Glu Asp Ala  Gly Val Ile Cys Ser  Ala Thr Gln
    1730                1735                1740

Ile Asn  Ser Thr Thr Thr Asp  Trp Trp His Pro Thr  Thr Thr Thr
    1745                1750                1755

Thr Ala  Arg Pro Ser Ser Asn  Cys Gly Gly Phe Leu  Phe Tyr Ala
    1760                1765                1770

Ser Gly  Thr Phe Ser Ser Pro  Ser Tyr Pro Ala Tyr  Tyr Pro Asn
    1775                1780                1785

Asn Ala  Lys Cys Val Trp Glu  Ile Glu Val Asn Ser  Gly Tyr Arg
    1790                1795                1800

Ile Asn  Leu Gly Phe Ser Asn  Leu Lys Leu Glu Ala  His His Asn
    1805                1810                1815

Cys Ser  Phe Asp Tyr Val Glu  Ile Phe Asp Gly Ser  Leu Asn Ser
    1820                1825                1830

Ser Leu  Leu Leu Gly Lys Ile  Cys Asn Asp Thr Arg  Gln Ile Phe
    1835                1840                1845

Thr Ser  Ser Tyr Asn Arg Met  Thr Ile His Phe Arg  Ser Asp Ile
    1850                1855                1860

Ser Phe  Gln Asn Thr Gly Phe  Leu Ala Trp Tyr Asn  Ser Phe Pro
    1865                1870                1875

Ser Asp  Ala Thr Leu Arg Leu  Val Asn Leu Asn Ser  Ser Tyr Gly
    1880                1885                1890

Leu Cys  Ala Gly Arg Val Glu  Ile Tyr His Gly Gly  Thr Trp Gly
    1895                1900                1905

Ala Val  Cys Asp Asp Ser Trp  Thr Ile Gln Glu Ala  Glu Val Val
    1910                1915                1920

Cys Arg  Gln Leu Gly Cys Gly  Arg Ala Val Ser Ala  Leu Gly Asn
    1925                1930                1935

Ala Tyr  Phe Gly Ser Gly Ser  Gly Pro Ile Thr Leu  Asp Asp Val
```

1940 1945 1950

Glu Cys Ser Gly Thr Glu Ser Thr Leu Trp Gln Cys Arg Asn Arg
1955 1960 1965

Gly Trp Phe Ser His Asn Cys Asn His Arg Glu Asp Ala Gly Val
1970 1975 1980

Ile Cys Ser Gly Asn His Leu Ser Thr Pro Ala Pro Phe Leu Asn
1985 1990 1995

Ile Thr Arg Pro Asn Asn Tyr Ser Cys Gly Gly Phe Leu Ser Gln
2000 2005 2010

Pro Ser Gly Asp Phe Ser Ser Pro Phe Tyr Pro Gly Asn Tyr Pro
2015 2020 2025

Asn Asn Ala Lys Cys Val Trp Asp Ile Glu Val Gln Asn Asn Tyr
2030 2035 2040

Arg Val Thr Val Ile Phe Arg Asp Val Gln Leu Glu Gly Gly Cys
2045 2050 2055

Asn Tyr Asp Tyr Ile Glu Val Phe Asp Gly Pro Tyr Arg Ser Ser
2060 2065 2070

Pro Leu Ile Ala Arg Val Cys Asp Gly Ala Arg Gly Ser Phe Thr
2075 2080 2085

Ser Ser Ser Asn Phe Met Ser Ile Arg Phe Ile Ser Asp His Ser
2090 2095 2100

Ile Thr Arg Arg Gly Phe Arg Ala Glu Tyr Tyr Ser Ser Pro Ser
2105 2110 2115

Asn Asp Ser Thr Asn Leu Leu Cys Leu Pro Asn His Met Gln Ala
2120 2125 2130

Ser Val Ser Arg Ser Tyr Leu Gln Ser Leu Gly Phe Ser Ala Ser
2135 2140 2145

Asp Leu Val Ile Ser Thr Trp Asn Gly Tyr Tyr Glu Cys Arg Pro
2150 2155 2160

```
Gln Ile  Thr Pro Asn Leu Val  Ile Phe Thr Ile Pro  Tyr Ser Gly
    2165                 2170                 2175

Cys Gly  Thr Phe Lys Gln Ala  Asp Asn Asp Thr Ile  Asp Tyr Ser
    2180                 2185                 2190

Asn Leu  Leu Thr Ala Ala Val  Ser Gly Gly Ile Ile  Lys Arg Arg
    2195                 2200                 2205

Thr Asp  Leu Arg Ile His Val  Ser Cys Arg Met Leu  Gln Asn Thr
    2210                 2215                 2220

Trp Val  Asp Thr Met Tyr Ile  Ala Asn Asp Thr Ile  His Val Ala
    2225                 2230                 2235

Asn Asn  Thr Ile Gln Val Glu  Glu Val Gln Tyr Gly  Asn Phe Asp
    2240                 2245                 2250

Val Asn  Ile Ser Phe Tyr Thr  Ser Ser Ser Phe Leu  Tyr Pro Val
    2255                 2260                 2265

Thr Ser  Arg Pro Tyr Tyr Val  Asp Leu Asn Gln Asp  Leu Tyr Val
    2270                 2275                 2280

Gln Ala  Glu Ile Leu His Ser  Asp Ala Val Leu Thr  Leu Phe Val
    2285                 2290                 2295

Asp Thr  Cys Val Ala Ser Pro  Tyr Ser Asn Asp Phe  Thr Ser Leu
    2300                 2305                 2310

Thr Tyr  Asp Leu Ile Arg Ser  Gly Cys Val Arg Asp  Asp Thr Tyr
    2315                 2320                 2325

Gly Pro  Tyr Ser Ser Pro Ser  Leu Arg Ile Ala Arg  Phe Arg Phe
    2330                 2335                 2340

Arg Ala  Phe His Phe Leu Asn  Arg Phe Pro Ser Val  Tyr Leu Arg
    2345                 2350                 2355

Cys Lys  Met Val Val Cys Arg  Ala Tyr Asp Pro Ser  Ser Arg Cys
    2360                 2365                 2370

Tyr Arg  Gly Cys Val Leu Arg  Ser Lys Arg Asp Val  Gly Ser Tyr
```

2375 2380 2385

Gln Glu Lys Val Asp Val Val Leu Gly Pro Ile Gln Leu Gln Thr
2390 2395 2400

Pro Pro Arg Arg Glu Glu Glu Pro Arg
2405 2410

<210> 71
<211> 277
<212> PRT
<213> Homo sapiens

<400> 71

Met Asn Gly Phe Ala Ser Leu Leu Arg Arg Asn Gln Phe Ile Leu Leu
1 5 10 15

Val Leu Phe Leu Leu Gln Ile Gln Ser Leu Gly Leu Asp Ile Asp Ser
20 25 30

Arg Pro Thr Ala Glu Val Cys Ala Thr His Thr Ile Ser Pro Gly Pro
35 40 45

Lys Gly Asp Asp Gly Glu Lys Gly Asp Pro Gly Glu Glu Gly Lys His
50 55 60

Gly Lys Val Gly Arg Met Gly Pro Lys Gly Ile Lys Gly Glu Leu Gly
65 70 75 80

Asp Met Gly Asp Arg Gly Asn Ile Gly Lys Thr Gly Pro Ile Gly Lys
85 90 95

Lys Gly Asp Lys Gly Glu Lys Gly Leu Leu Gly Ile Pro Gly Glu Lys
100 105 110

Gly Lys Ala Gly Thr Val Cys Asp Cys Gly Arg Tyr Arg Lys Phe Val
115 120 125

Gly Gln Leu Asp Ile Ser Ile Ala Arg Leu Lys Thr Ser Met Lys Phe
130 135 140

Val Lys Asn Val Ile Ala Gly Ile Arg Glu Thr Glu Glu Lys Phe Tyr
145 150 155 160

```
Tyr Ile Val Gln Glu Glu Lys Asn Tyr Arg Glu Ser Leu Thr His Cys
                165                 170                 175

Arg Ile Arg Gly Gly Met Leu Ala Met Pro Lys Asp Glu Ala Ala Asn
            180                 185                 190

Thr Leu Ile Ala Asp Tyr Val Ala Lys Ser Gly Phe Phe Arg Val Phe
        195                 200                 205

Ile Gly Val Asn Asp Leu Glu Arg Glu Gly Gln Tyr Met Phe Thr Asp
    210                 215                 220

Asn Thr Pro Leu Gln Asn Tyr Ser Asn Trp Asn Glu Gly Glu Pro Ser
225                 230                 235                 240

Asp Pro Tyr Gly His Glu Asp Cys Val Glu Met Leu Ser Ser Gly Arg
                245                 250                 255

Trp Asn Asp Thr Glu Cys His Leu Thr Met Tyr Phe Val Cys Glu Phe
            260                 265                 270

Ile Lys Lys Lys Lys
        275
```

<210> 72
<211> 238
<212> PRT
<213> Gallus gallus

<400> 72

```
Met Met Ala Thr Ser Leu Leu Thr Thr Asp Lys Pro Glu Glu Lys Met
1               5                   10                  15

Tyr Ser Cys Pro Ile Ile Gln Cys Ser Ala Pro Ala Val Asn Gly Leu
            20                  25                  30

Pro Gly Arg Asp Gly Arg Asp Gly Pro Lys Gly Glu Lys Gly Asp Pro
        35                  40                  45

Gly Glu Gly Leu Arg Gly Leu Gln Gly Leu Pro Gly Lys Ala Gly Pro
    50                  55                  60

Gln Gly Leu Lys Gly Glu Val Gly Pro Gln Gly Glu Lys Gly Gln Lys
65                  70                  75                  80
```

```
Gly Glu Arg Gly Ile Val Val Thr Asp Asp Leu His Arg Gln Ile Thr
                85                  90                  95

Asp Leu Glu Ala Lys Ile Arg Val Leu Glu Asp Asp Leu Ser Arg Tyr
            100                 105                 110

Lys Lys Ala Leu Ser Leu Lys Asp Val Val Asn Ile Gly Lys Lys Met
        115                 120                 125

Phe Val Ser Thr Gly Lys Lys Tyr Asn Phe Glu Lys Gly Lys Ser Leu
    130                 135                 140

Cys Ala Lys Ala Gly Ser Val Leu Ala Ser Pro Arg Asn Glu Ala Glu
145                 150                 155                 160

Asn Thr Ala Leu Lys Asp Leu Ile Asp Pro Ser Ser Gln Ala Tyr Ile
                165                 170                 175

Gly Ile Ser Asp Ala Gln Thr Glu Gly Arg Phe Met Tyr Leu Ser Gly
            180                 185                 190

Gly Pro Leu Thr Tyr Ser Asn Trp Lys Pro Gly Glu Pro Asn Asn His
        195                 200                 205

Lys Asn Glu Asp Cys Ala Val Ile Glu Asp Ser Gly Lys Trp Asn Asp
    210                 215                 220

Leu Asp Cys Ser Asn Ser Asn Ile Phe Ile Ile Cys Glu Leu
225                 230                 235


<210>  73
<211>  30
<212>  PRT
<213>  Gallus gallus

<400>  73

Leu Leu Thr Cys Asp Lys Pro Glu Glu Lys Met Tyr Ser Cys Pro Ile
1               5                   10                  15

Ile Gln Cys Ser Ala Pro Ala Val Asn Gly Leu Pro Gly Asp
            20                  25                  30


<210>  74
<211>  60
```

<212> PRT
<213> Bos taurus

<400> 74

```
Ala Glu Met Thr Thr Phe Ser Gln Lys Ile Leu Ala Asn Ala Cys Thr
1               5                   10                  15


Leu Val Met Cys Ser Pro Leu Glu Ser Gly Leu Pro Gly His Asp Gly
            20                  25                  30


Gln Asp Gly Arg Glu Cys Pro His Gly Glu Lys Gly Asp Pro Gly Ser
        35                  40                  45


Pro Gly Pro Ala Gly Arg Ala Gly Arg Pro Gly Trp
    50                  55                  60
```

<210> 75
<211> 301
<212> PRT
<213> Bos taurus

<220>
<221> MISC_FEATURE
<222> (7)..()
<223> Unknown

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> Unknown

<400> 75

```
Glu Glu Met Asp Val Tyr Xaa Glu Lys Thr Leu Thr Asp Pro Cys Thr
1               5                   10                  15


Leu Val Val Cys Ala Pro Pro Ala Asp Ser Leu Arg Gly His Asp Gly
            20                  25                  30


Arg Asp Gly Lys Glu Gly Pro Gln Gly Glu Lys Gly Asp Pro Gly Pro
        35                  40                  45


Pro Gly Met Pro Gly Pro Ala Gly Arg Glu Gly Pro Ser Gly Arg Gln
    50                  55                  60


Gly Ser Met Gly Pro Pro Gly Thr Pro Gly Pro Lys Gly Glu Pro Gly
65                  70                  75                  80
```

```
Pro Glu Gly Gly Val Gly Ala Pro Gly Met Pro Gly Ser Pro Gly Pro
                85                  90                  95

Ala Gly Leu Lys Gly Glu Arg Gly Ala Pro Gly Pro Gly Gly Ala Ile
            100                 105                 110

Gly Pro Gln Gly Pro Ser Gly Ala Met Gly Pro Pro Gly Leu Lys Gly
        115                 120                 125

Asp Arg Gly Asp Pro Gly Glu Lys Gly Ala Arg Gly Glu Thr Ser Val
    130                 135                 140

Leu Glu Val Asp Thr Leu Arg Gln Arg Met Arg Asn Leu Glu Gly Glu
145                 150                 155                 160

Val Gln Arg Leu Gln Asn Ile Val Thr Gln Tyr Arg Lys Ala Val Leu
                165                 170                 175

Phe Pro Asp Gly Gln Ala Val Gly Glu Lys Ile Phe Lys Thr Ala Gly
            180                 185                 190

Ala Val Lys Ser Tyr Ser Asp Ala Glu Gln Leu Cys Arg Glu Ala Lys
        195                 200                 205

Gly Gln Leu Ala Ser Pro Arg Ser Ser Ala Glu Asn Glu Ala Val Thr
    210                 215                 220

Gln Leu Val Arg Ala Lys Asn Lys His Ala Tyr Leu Ser Met Asn Asp
225                 230                 235                 240

Ile Ser Lys Glu Gly Lys Phe Thr Tyr Pro Thr Gly Gly Ser Leu Asp
                245                 250                 255

Tyr Ser Asn Trp Ala Pro Gly Glu Pro Gly Asn Arg Ala Lys Asp Glu
            260                 265                 270

Gly Pro Glu Asn Cys Leu Glu Ile Tyr Ser Asp Gly Asn Trp Asn Asp
        275                 280                 285

Ile Glu Cys Arg Glu Glu Arg Leu Val Ile Cys Glu Phe
    290                 295                 300
```

<210> 76

<211> 244
<212> PRT
<213> Mus musculus

<400> 76

```
Met Ser Ile Phe Thr Ser Phe Leu Leu Leu Cys Val Val Thr Val Val
1               5                  10                  15

Tyr Ala Glu Thr Leu Thr Glu Gly Val Gln Asn Ser Cys Pro Val Val
            20                  25                  30

Thr Cys Ser Ser Pro Gly Leu Asn Gly Phe Pro Gly Lys Asp Gly Arg
        35                  40                  45

Asp Gly Ala Lys Gly Glu Lys Gly Glu Pro Gly Gln Gly Leu Arg Gly
    50                  55                  60

Leu Gln Gly Pro Pro Gly Lys Val Gly Pro Thr Gly Pro Pro Gly Asn
65                  70                  75                  80

Pro Gly Leu Lys Gly Ala Val Gly Pro Lys Gly Asp Arg Gly Asp Arg
                85                  90                  95

Ala Glu Phe Asp Thr Ser Glu Ile Asp Ser Glu Ile Ala Ala Leu Arg
            100                 105                 110

Ser Glu Leu Arg Ala Leu Arg Asn Trp Val Leu Phe Ser Leu Ser Glu
        115                 120                 125

Lys Val Gly Lys Lys Tyr Phe Val Ser Ser Val Lys Lys Met Ser Leu
    130                 135                 140

Asp Arg Val Lys Ala Leu Cys Ser Glu Phe Gln Gly Ser Val Ala Thr
145                 150                 155                 160

Pro Arg Asn Ala Glu Glu Asn Ser Ala Ile Gln Lys Val Ala Lys Asp
                165                 170                 175

Ile Ala Tyr Leu Gly Ile Thr Asp Val Arg Val Glu Gly Ser Phe Glu
            180                 185                 190

Asp Leu Thr Gly Asn Arg Val Arg Tyr Thr Asn Trp Asn Asp Gly Glu
        195                 200                 205
```

```
Pro Asn Asn Thr Gly Asp Gly Glu Asp Cys Val Val Ile Leu Gly Asn
    210                 215                 220

Gly Lys Trp Asn Asp Val Pro Cys Ser Asp Ser Phe Leu Ala Ile Cys
225                 230                 235                 240

Glu Phe Ser Asp
```

<210> 77
<211> 239
<212> PRT
<213> Mus musculus

<400> 77

```
Met Leu Leu Leu Pro Leu Leu Pro Val Leu Leu Cys Val Val Ser Val
1               5                   10                  15

Ser Ser Ser Gly Ser Gln Thr Cys Glu Asp Thr Leu Lys Thr Cys Ser
            20                  25                  30

Val Ile Ala Cys Gly Arg Asp Gly Arg Asp Gly Pro Lys Gly Glu Lys
        35                  40                  45

Gly Glu Pro Gly Gln Gly Leu Arg Gly Leu Gln Gly Pro Pro Gly Lys
    50                  55                  60

Leu Gly Pro Pro Gly Ser Val Gly Ser Pro Gly Ser Pro Gly Pro Lys
65                  70                  75                  80

Gly Gln Lys Gly Asp His Gly Asp Asn Arg Ala Ile Glu Glu Lys Leu
                85                  90                  95

Ala Asn Met Glu Ala Glu Ile Arg Ile Leu Lys Ser Lys Leu Gln Leu
            100                 105                 110

Thr Asn Lys Leu His Ala Phe Ser Met Gly Lys Lys Ser Gly Lys Lys
        115                 120                 125

Leu Phe Val Thr Asn His Glu Lys Met Pro Phe Ser Lys Val Lys Ser
    130                 135                 140

Leu Cys Thr Glu Leu Gln Gly Thr Val Ala Ile Pro Arg Asn Ala Glu
145                 150                 155                 160
```

```
Glu Asn Lys Ala Ile Gln Glu Val Ala Thr Gly Ile Ala Phe Leu Gly
                165                 170                 175

Ile Thr Asp Glu Ala Thr Glu Gly Gln Phe Met Tyr Val Thr Gly Gly
            180                 185                 190

Arg Leu Thr Tyr Ser Asn Trp Lys Lys Asp Glu Pro Asn Asn His Gly
        195                 200                 205

Ser Gly Glu Asp Cys Val Ile Ile Leu Asp Asn Gly Leu Trp Asn Asp
    210                 215                 220

Ile Ser Cys Gln Ala Ser Phe Lys Ala Val Cys Glu Phe Pro Ala
225                 230                 235
```

<210> 78
<211> 375
<212> PRT
<213> Homo sapiens

<400> 78

```
Met Leu Leu Phe Leu Leu Ser Ala Leu Val Leu Leu Thr Gln Pro Leu
1               5                   10                  15

Gly Tyr Leu Glu Ala Glu Met Lys Thr Tyr Ser His Arg Thr Met Pro
            20                  25                  30

Ser Ala Cys Thr Leu Val Met Cys Ser Ser Val Glu Ser Gly Leu Pro
        35                  40                  45

Gly Arg Asp Gly Arg Asp Gly Arg Glu Gly Pro Arg Gly Glu Lys Gly
    50                  55                  60

Asp Pro Gly Leu Pro Gly Ala Ala Gly Gln Ala Gly Met Pro Gly Gln
65                  70                  75                  80

Ala Gly Pro Val Gly Pro Lys Gly Asp Asn Gly Ser Val Gly Glu Pro
                85                  90                  95

Gly Pro Lys Gly Asp Thr Gly Pro Ser Gly Pro Pro Gly Pro Pro Gly
            100                 105                 110

Val Pro Gly Pro Ala Gly Arg Glu Gly Ala Leu Gly Lys Gln Gly Asn
        115                 120                 125
```

```
Ile Gly Pro Gln Gly Lys Pro Gly Pro Lys Gly Glu Ala Gly Pro Lys
    130                 135                 140

Gly Glu Val Gly Ala Pro Gly Met Gln Gly Ser Ala Gly Ala Arg Gly
145                 150                 155                 160

Leu Ala Gly Pro Lys Gly Glu Arg Gly Val Pro Gly Glu Arg Gly Val
                165                 170                 175

Pro Gly Asn Thr Gly Ala Ala Gly Ser Ala Gly Ala Met Gly Pro Gln
            180                 185                 190

Gly Ser Pro Gly Ala Arg Gly Pro Pro Gly Leu Lys Gly Asp Lys Gly
        195                 200                 205

Ile Pro Gly Asp Lys Gly Ala Lys Gly Glu Ser Gly Leu Pro Asp Val
    210                 215                 220

Ala Ser Leu Arg Gln Gln Val Glu Ala Leu Gln Gly Gln Val Gln His
225                 230                 235                 240

Leu Gln Ala Ala Phe Ser Gln Tyr Lys Lys Val Glu Leu Phe Pro Asn
                245                 250                 255

Gly Gln Ser Val Gly Glu Lys Ile Phe Lys Thr Ala Gly Phe Val Lys
            260                 265                 270

Pro Phe Thr Glu Ala Gln Leu Leu Cys Thr Gln Ala Gly Gly Gln Leu
        275                 280                 285

Ala Ser Pro Arg Ser Ala Ala Glu Asn Ala Ala Leu Gln Gln Leu Val
    290                 295                 300

Val Ala Lys Asn Glu Ala Ala Phe Leu Ser Met Thr Asp Ser Lys Thr
305                 310                 315                 320

Glu Gly Lys Phe Thr Tyr Pro Thr Gly Glu Ser Leu Val Tyr Ser Asn
                325                 330                 335

Trp Ala Pro Gly Glu Pro Asn Asp Asp Gly Gly Ser Glu Asp Cys Val
            340                 345                 350
```

```
Glu Ile Phe Thr Asn Gly Lys Trp Asn Asp Arg Ala Cys Gly Glu Lys
        355                 360                 365

Arg Leu Val Val Cys Glu Phe
    370                 375
```

<210> 79
<211> 255
<212> PRT
<213> Homo sapiens

<400> 79

```
Met Lys Ala Leu Leu Ala Leu Pro Leu Leu Leu Leu Leu Ser Thr Pro
1               5                   10                  15

Pro Cys Ala Pro Gln Val Ser Gly Ile Arg Gly Asp Ala Leu Glu Arg
            20                  25                  30

Phe Cys Leu Gln Gln Pro Leu Asp Cys Asp Asp Ile Tyr Ala Gln Gly
        35                  40                  45

Tyr Gln Ser Asp Gly Val Tyr Leu Ile Tyr Pro Ser Gly Pro Ser Val
    50                  55                  60

Pro Val Pro Val Phe Cys Asp Met Thr Thr Glu Gly Gly Lys Trp Thr
65                  70                  75                  80

Val Phe Gln Lys Arg Phe Asn Gly Ser Val Ser Phe Phe Arg Gly Trp
                85                  90                  95

Asn Asp Tyr Lys Leu Gly Phe Gly Arg Ala Asp Gly Glu Tyr Trp Leu
            100                 105                 110

Gly Leu Gln Asn Met His Leu Leu Thr Leu Lys Gln Lys Tyr Glu Leu
        115                 120                 125

Arg Val Asp Leu Glu Asp Phe Glu Asn Asn Thr Ala Tyr Ala Lys Tyr
    130                 135                 140

Ala Asp Phe Ser Ile Ser Pro Asn Ala Val Ser Ala Glu Glu Asp Gly
145                 150                 155                 160

Tyr Thr Leu Phe Val Ala Gly Phe Glu Asp Gly Gly Ala Gly Asp Ser
                165                 170                 175
```

```
Leu Ser Tyr His Ser Gly Gln Lys Phe Ser Thr Phe Asp Arg Asp Gln
            180                 185                 190

Asp Leu Phe Val Gln Asn Cys Ala Ala Leu Ser Ser Gly Ala Phe Trp
        195                 200                 205

Phe Arg Ser Cys His Phe Ala Asn Leu Asn Gly Phe Tyr Leu Gly Gly
    210                 215                 220

Ser His Leu Ser Tyr Ala Asn Gly Ile Asn Trp Ala Gln Trp Lys Gly
225                 230                 235                 240

Phe Tyr Tyr Ser Leu Lys Arg Thr Glu Met Lys Ile Arg Arg Ala
                245                 250                 255
```

<210> 80
<211> 15
<212> PRT
<213> Homo sapiens

<400> 80

```
Cys Arg Ala Leu Ile Lys Arg Ile Gln Ala Met Ile Pro Lys Gly
1               5                   10                  15
```

<210> 81
<211> 374
<212> PRT
<213> Mus musculus

<400> 81

```
Met Leu Pro Phe Leu Ser Met Leu Val Leu Leu Val Gln Pro Leu Gly
1               5                   10                  15

Asn Leu Gly Ala Glu Met Lys Ser Leu Ser Gln Arg Ser Val Pro Asn
            20                  25                  30

Thr Cys Thr Leu Val Met Cys Ser Pro Thr Glu Asn Gly Leu Pro Gly
        35                  40                  45

Arg Asp Gly Arg Asp Gly Arg Glu Gly Pro Arg Gly Glu Lys Gly Asp
    50                  55                  60

Pro Gly Leu Pro Gly Pro Met Gly Leu Ser Gly Leu Gln Gly Pro Thr
65                  70                  75                  80
```

```
Gly Pro Val Gly Pro Lys Gly Glu Asn Gly Ser Ala Gly Glu Pro Gly
                85                  90                  95

Pro Lys Gly Glu Arg Gly Leu Ser Gly Pro Pro Gly Leu Pro Gly Ile
            100                 105                 110

Pro Gly Pro Ala Gly Lys Glu Gly Pro Ser Gly Lys Gln Gly Asn Ile
        115                 120                 125

Gly Pro Gln Gly Lys Pro Gly Pro Lys Gly Glu Ala Gly Pro Lys Gly
    130                 135                 140

Glu Val Gly Ala Pro Gly Met Gln Gly Ser Thr Gly Ala Lys Gly Ser
145                 150                 155                 160

Thr Gly Pro Lys Gly Glu Arg Gly Ala Pro Gly Val Gln Gly Ala Pro
                165                 170                 175

Gly Asn Ala Gly Ala Ala Gly Pro Ala Gly Pro Ala Gly Pro Gln Gly
            180                 185                 190

Ala Pro Gly Ser Arg Gly Pro Pro Gly Leu Lys Gly Asp Arg Gly Val
        195                 200                 205

Pro Gly Asp Arg Gly Ile Lys Gly Glu Ser Gly Leu Pro Asp Ser Ala
    210                 215                 220

Ala Leu Arg Gln Gln Met Glu Ala Leu Lys Gly Lys Leu Gln Arg Leu
225                 230                 235                 240

Glu Val Ala Phe Ser His Tyr Gln Lys Ala Ala Leu Phe Pro Asp Gly
                245                 250                 255

Arg Ser Val Gly Asp Lys Ile Phe Arg Thr Ala Asp Ser Glu Lys Pro
            260                 265                 270

Phe Glu Asp Ala Gln Glu Met Cys Lys Gln Ala Gly Gly Gln Leu Ala
        275                 280                 285

Ser Pro Arg Ser Ala Thr Glu Asn Ala Ala Ile Gln Gln Leu Ile Thr
    290                 295                 300

Ala His Asn Lys Ala Ala Phe Leu Ser Met Thr Asp Val Gly Thr Glu
```

305 310 315 320

Gly Lys Phe Thr Tyr Pro Thr Gly Glu Pro Leu Val Tyr Ser Asn Trp
325 330 335

Ala Pro Gly Glu Pro Asn Asn Asn Gly Gly Ala Glu Asn Cys Val Glu
340 345 350

Ile Phe Thr Asn Gly Gln Trp Asn Asp Lys Ala Cys Gly Glu Gln Arg
355 360 365

Leu Val Ile Cys Glu Phe
370

<210> 82
<211> 248
<212> PRT
<213> Canis familiaris

<400> 82

Met Trp Leu Arg Cys Leu Ala Leu Ala Leu Thr Leu Leu Met Val Ser
1 5 10 15

Gly Ile Glu Asn Asn Thr Lys Asp Val Cys Val Gly Asn Pro Gly Ile
20 25 30

Pro Gly Thr Pro Gly Ser His Gly Leu Pro Gly Arg Asp Gly Arg Asp
35 40 45

Gly Val Lys Gly Asp Pro Gly Pro Pro Gly Pro Leu Gly Pro Pro Gly
50 55 60

Gly Met Pro Gly His Pro Gly Pro Asn Gly Met Thr Gly Ala Pro Gly
65 70 75 80

Val Ala Gly Glu Arg Gly Glu Lys Gly Glu Pro Gly Glu Arg Gly Pro
85 90 95

Pro Gly Leu Pro Ala Ser Leu Asp Glu Glu Leu Gln Thr Thr Leu His
100 105 110

Asp Leu Arg His Gln Ile Leu Gln Thr Met Gly Val Leu Ser Leu His
115 120 125

```
Glu Ser Leu Leu Val Val Gly Arg Lys Val Phe Ser Ser Asn Ala Gln
    130                 135                 140

Ser Ile Asn Phe Asn Asp Ile Gln Glu Leu Cys Ala Gly Ala Gly Gly
145                 150                 155                 160

Gln Ile Ala Ala Pro Met Ser Pro Glu Glu Asn Glu Ala Val Ala Ser
                165                 170                 175

Ile Val Lys Lys Tyr Asn Thr Tyr Ala Tyr Leu Gly Leu Val Glu Ser
            180                 185                 190

Pro Asp Ser Gly Asp Phe Gln Tyr Met Asp Gly Ala Pro Val Asn Tyr
        195                 200                 205

Thr Asn Trp Tyr Pro Gly Glu Pro Arg Gly Arg Gly Lys Glu Gln Cys
    210                 215                 220

Val Glu Met Tyr Thr Asp Gly Gln Trp Asn Asn Lys Asn Cys Leu Gln
225                 230                 235                 240

Tyr Arg Leu Ala Ile Cys Glu Phe
                245
```

<210> 83
<211> 247
<212> PRT
<213> Oryctolagus cuniculus

<400> 83

```
Met Leu Leu Leu Ser Leu Ala Leu Thr Leu Ile Ser Ala Pro Ala Ser
1               5                   10                  15

Asp Thr Cys Asp Thr Lys Asp Val Cys Ile Gly Ser Pro Gly Ile Pro
            20                  25                  30

Gly Thr Pro Gly Ser His Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly
        35                  40                  45

Val Lys Gly Asp Pro Gly Pro Pro Gly Pro Met Gly Pro Pro Gly Gly
    50                  55                  60

Met Pro Gly Leu Pro Gly Arg Asp Gly Leu Ile Gly Ala Pro Gly Val
65                  70                  75                  80
```

```
Pro Gly Glu Arg Gly Asp Lys Gly Glu Pro Gly Glu Arg Gly Pro Pro
                85                  90                  95

Gly Leu Pro Ala Tyr Leu Asp Glu Glu Leu Gln Ala Thr Leu His Glu
            100                 105                 110

Leu Arg His His Ala Leu Gln Ser Ile Gly Val Leu Ser Leu Gln Gly
        115                 120                 125

Ser Met Lys Ala Val Gly Glu Lys Ile Phe Ser Thr Asn Gly Gln Ser
    130                 135                 140

Val Asn Phe Asp Ala Ile Arg Glu Val Cys Ala Arg Ala Gly Gly Arg
145                 150                 155                 160

Ile Ala Val Pro Arg Ser Leu Glu Glu Asn Glu Ala Ile Ala Ser Ile
                165                 170                 175

Val Lys Glu Arg Asn Thr Tyr Ala Tyr Leu Gly Leu Ala Glu Gly Pro
            180                 185                 190

Thr Ala Gly Asp Phe Tyr Tyr Leu Asp Gly Asp Pro Val Asn Tyr Thr
        195                 200                 205

Asn Trp Tyr Pro Gly Glu Pro Arg Gly Gln Gly Arg Glu Lys Cys Val
    210                 215                 220

Glu Met Tyr Thr Asp Gly Lys Trp Asn Asp Lys Asn Cys Leu Gln Tyr
225                 230                 235                 240

Arg Leu Val Ile Cys Glu Phe
                245
```

<210> 84
<211> 374
<212> PRT
<213> Mus musculus

<400> 84

```
Met Leu Pro Phe Leu Ser Met Leu Val Leu Leu Val Gln Pro Leu Gly
1               5                   10                  15

Asn Leu Gly Ala Glu Met Lys Ser Leu Ser Gln Arg Ser Val Pro Asn
            20                  25                  30
```

Thr Cys Thr Leu Val Met Cys Ser Pro Thr Glu Asn Gly Leu Pro Gly
35 40 45

Arg Asp Gly Arg Asp Gly Arg Glu Gly Pro Arg Gly Glu Lys Gly Asp
50 55 60

Pro Gly Leu Pro Gly Pro Met Gly Leu Ser Gly Leu Gln Gly Pro Thr
65 70 75 80

Gly Pro Val Gly Pro Lys Gly Glu Asn Gly Ser Ala Gly Glu Pro Gly
85 90 95

Pro Lys Gly Glu Arg Gly Leu Ser Gly Pro Pro Gly Leu Pro Gly Ile
100 105 110

Pro Gly Pro Ala Gly Lys Glu Gly Pro Ser Gly Lys Gln Gly Asn Ile
115 120 125

Gly Pro Gln Gly Lys Pro Gly Pro Lys Gly Glu Ala Gly Pro Lys Gly
130 135 140

Glu Val Gly Ala Pro Gly Met Gln Gly Ser Thr Gly Ala Lys Gly Ser
145 150 155 160

Thr Gly Pro Lys Gly Glu Arg Gly Ala Pro Gly Val Gln Gly Ala Pro
165 170 175

Gly Asn Ala Gly Ala Ala Gly Pro Ala Gly Pro Ala Gly Pro Gln Gly
180 185 190

Ala Pro Gly Ser Arg Gly Pro Pro Gly Leu Lys Gly Asp Arg Gly Val
195 200 205

Pro Gly Asp Arg Gly Ile Lys Gly Glu Ser Gly Leu Pro Asp Ser Ala
210 215 220

Ala Leu Arg Gln Gln Met Glu Ala Leu Lys Gly Lys Leu Gln Arg Leu
225 230 235 240

Glu Val Ala Phe Ser His Tyr Gln Lys Ala Ala Leu Phe Pro Asp Gly
245 250 255

```
Arg Ser Val Gly Asp Lys Ile Phe Arg Thr Ala Asp Ser Glu Lys Pro
            260                 265                 270

Phe Glu Asp Ala Gln Glu Met Cys Lys Gln Ala Gly Gly Gln Leu Ala
        275                 280                 285

Ser Pro Arg Ser Ala Thr Glu Asn Ala Ala Ile Gln Gln Leu Ile Thr
    290                 295                 300

Ala His Asn Lys Ala Ala Phe Leu Ser Met Thr Asp Val Gly Thr Glu
305                 310                 315                 320

Gly Lys Phe Thr Tyr Pro Thr Gly Glu Pro Leu Val Tyr Ser Asn Trp
                325                 330                 335

Ala Pro Gly Glu Pro Asn Asn Asn Gly Gly Ala Glu Asn Cys Val Glu
            340                 345                 350

Ile Phe Thr Asn Gly Gln Trp Asn Asp Lys Ala Cys Gly Glu Gln Arg
        355                 360                 365

Leu Val Ile Cys Glu Phe
    370
```

<210> 85
<211> 158
<212> PRT
<213> Homo sapiens

<400> 85

```
Glu Ala Glu Ala Gly Ser Val Ala Ser Leu Arg Gln Gln Val Glu Ala
1               5                   10                  15

Leu Gln Gly Gln Val Gln His Leu Gln Ala Ala Phe Ser Gln Tyr Lys
            20                  25                  30

Lys Val Glu Leu Phe Pro Asn Gly Gln Ser Val Gly Glu Lys Ile Phe
        35                  40                  45

Lys Thr Ala Gly Phe Val Lys Pro Phe Thr Glu Ala Gln Leu Leu Cys
    50                  55                  60

Thr Gln Ala Gly Gly Gln Leu Ala Ser Pro Arg Ser Ala Ala Glu Asn
65                  70                  75                  80
```

```
Ala Ala Leu Gln Gln Leu Val Val Ala Lys Asn Glu Ala Ala Phe Leu
                85                  90                  95

Ser Met Thr Asp Ser Lys Thr Glu Gly Lys Phe Thr Tyr Pro Thr Gly
            100                 105                 110

Glu Ser Leu Val Tyr Ser Asn Trp Ala Pro Gly Glu Pro Asn Asp Asp
        115                 120                 125

Gly Gly Ser Glu Asp Cys Val Glu Ile Phe Thr Asn Gly Lys Trp Asn
    130                 135                 140

Asp Arg Ala Cys Gly Glu Lys Arg Leu Val Val Cys Glu Phe
145                 150                 155
```

<210> 86
<211> 158
<212> PRT
<213> Homo sapiens

<400> 86

```
Glu Ala Glu Ala Gly Ser Val Ala Ser Leu Arg Gln Gln Val Glu Ala
1               5                   10                  15

Leu Gln Gly Gln Val Gln His Leu Gln Ala Ala Phe Ser Gln Tyr Lys
            20                  25                  30

Lys Val Glu Leu Phe Pro Asn Gly Gln Ser Val Gly Glu Lys Ile Phe
        35                  40                  45

Lys Thr Ala Gly Phe Val Lys Pro Phe Thr Glu Ala Gln Leu Leu Cys
    50                  55                  60

Thr Gln Ala Gly Gly Gln Leu Ala Ser Pro Arg Ser Ala Ala Glu Asn
65                  70                  75                  80

Ala Ala Leu Gln Gln Leu Val Val Ala Lys Asn Glu Ala Ala Phe Leu
                85                  90                  95

Ser Met Thr Asp Ser Lys Thr Glu Gly Lys Phe Thr Tyr Pro Thr Gly
            100                 105                 110

Glu Ser Leu Val Tyr Ser Asn Trp Ala Pro Gly Glu Pro Asn Asp Asp
        115                 120                 125
```

Gly Gly Ser Glu Asp Cys Val Glu Ile Phe Thr Asn Gly Lys Trp Asn
130 135 140

Asp Arg Ala Cys Gly Glu Lys Arg Leu Val Val Cys Glu Phe
145 150 155

<210> 87
<211> 158
<212> PRT
<213> Homo sapiens

<400> 87

Glu Ala Glu Ala Gly Ser Val Ala Ser Leu Arg Gln Gln Val Glu Ala
1 5 10 15

Leu Gln Gly Gln Val Gln His Leu Gln Ala Ala Phe Ser Gln Tyr Lys
20 25 30

Lys Val Glu Leu Phe Pro Asn Gly Gln Ser Val Gly Glu Lys Ile Phe
35 40 45

Lys Thr Ala Gly Phe Val Lys Pro Phe Thr Glu Ala Gln Leu Leu Cys
50 55 60

Thr Gln Ala Gly Gly Gln Leu Ala Ser Pro Arg Ser Ala Ala Glu Asn
65 70 75 80

Ala Ala Leu Gln Gln Leu Val Val Ala Lys Asn Glu Ala Ala Phe Leu
85 90 95

Ser Met Thr Asp Ser Lys Thr Glu Gly Lys Phe Thr Tyr Pro Thr Gly
100 105 110

Glu Ser Leu Val Tyr Ser Asn Trp Ala Pro Gly Glu Pro Asn Asp Asp
115 120 125

Gly Gly Ser Glu Asp Cys Val Glu Ile Phe Thr Asn Gly Lys Trp Asn
130 135 140

Asp Arg Ala Cys Gly Glu Lys Arg Leu Val Val Cys Glu Phe
145 150 155

<210> 88

<211> 2403
<212> PRT
<213> Homo sapiens

<400> 88

```
Met Gly Ile Ser Thr Val Ile Leu Glu Met Cys Leu Leu Trp Gly Gln
1               5                  10                  15

Val Leu Ser Thr Gly Gly Trp Ile Pro Arg Thr Thr Asp Tyr Ala Ser
            20                  25                  30

Leu Ile Pro Ser Glu Val Pro Leu Asp Thr Thr Val Ala Glu Gly Ser
        35                  40                  45

Pro Phe Pro Ser Glu Leu Thr Leu Glu Ser Thr Ala Ala Glu Gly Ser
    50                  55                  60

Pro Ile Ser Leu Glu Ser Thr Leu Glu Ser Thr Val Ala Glu Gly Ser
65                  70                  75                  80

Leu Ile Pro Ser Glu Ser Thr Leu Glu Ser Thr Val Ala Glu Gly Ser
                85                  90                  95

Asp Ser Gly Leu Ala Leu Arg Leu Val Asn Gly Asp Gly Arg Cys Gln
            100                 105                 110

Gly Arg Val Glu Ile Leu Tyr Arg Gly Ser Trp Gly Thr Val Cys Asp
        115                 120                 125

Asp Ser Trp Asp Thr Asn Asp Ala Asn Val Val Cys Arg Gln Leu Gly
    130                 135                 140

Cys Gly Trp Ala Met Ser Ala Pro Gly Asn Ala Trp Phe Gly Gln Gly
145                 150                 155                 160

Ser Gly Pro Ile Ala Leu Asp Asp Val Arg Cys Ser Gly His Glu Ser
                165                 170                 175

Tyr Leu Trp Ser Cys Pro His Asn Gly Trp Leu Ser His Asn Cys Gly
            180                 185                 190

His Gly Glu Asp Ala Gly Val Ile Cys Ser Ala Ala Gln Pro Gln Ser
        195                 200                 205
```

```
Thr Leu Arg Pro Glu Ser Trp Pro Val Arg Ile Ser Pro Pro Val Pro
    210                 215                 220

Thr Glu Gly Ser Glu Ser Ser Leu Ala Leu Arg Leu Val Asn Gly Gly
225                 230                 235                 240

Asp Arg Cys Arg Gly Arg Val Glu Val Leu Tyr Arg Gly Ser Trp Gly
                245                 250                 255

Thr Val Cys Asp Asp Tyr Trp Asp Thr Asn Asp Ala Asn Val Val Cys
            260                 265                 270

Arg Gln Leu Gly Cys Gly Trp Ala Met Ser Ala Pro Gly Asn Ala Gln
        275                 280                 285

Phe Gly Gln Gly Ser Gly Pro Ile Val Leu Asp Asp Val Arg Cys Ser
    290                 295                 300

Gly His Glu Ser Tyr Leu Trp Ser Cys Pro His Asn Gly Trp Leu Thr
305                 310                 315                 320

His Asn Cys Gly His Ser Glu Asp Ala Gly Val Ile Cys Ser Ala Pro
                325                 330                 335

Leu Ser Arg Pro Thr Pro Ser Pro Asp Thr Trp Pro Thr Ser His Ala
            340                 345                 350

Ser Thr Ala Gly Pro Glu Ser Ser Leu Ala Leu Arg Leu Val Asn Gly
        355                 360                 365

Gly Asp Arg Cys Gln Gly Arg Val Glu Val Leu Tyr Arg Gly Ser Trp
    370                 375                 380

Gly Thr Val Cys Asp Asp Ser Trp Asp Thr Ser Asp Ala Asn Val Val
385                 390                 395                 400

Cys Arg Gln Leu Gly Cys Gly Trp Ala Thr Ser Ala Pro Gly Asn Ala
                405                 410                 415

Arg Phe Gly Gln Gly Ser Gly Pro Ile Val Leu Asp Asp Val Arg Cys
            420                 425                 430

Ser Gly Tyr Glu Ser Tyr Leu Trp Ser Cys Pro His Asn Gly Trp Leu
        435                 440                 445
```

```
Ser His Asn Cys Gln His Ser Glu Asp Ala Gly Val Ile Cys Ser Asp
    450                 455                 460

Thr Leu Pro Thr Ile Thr Leu Pro Ala Ser Thr Val Gly Ser Glu Ser
465                 470                 475                 480

Ser Leu Ala Leu Arg Leu Val Asn Gly Gly Asp Arg Cys Gln Gly Arg
                485                 490                 495

Val Glu Val Leu Tyr Arg Gly Ser Trp Gly Thr Val Cys Asp Asp Ser
            500                 505                 510

Trp Asp Thr Asn Asp Ala Asn Val Val Cys Arg Gln Leu Gly Cys Gly
        515                 520                 525

Trp Ala Met Leu Ala Pro Gly Asn Ala Arg Phe Gly Gln Gly Ser Gly
    530                 535                 540

Pro Ile Val Leu Asp Asp Val Arg Cys Ser Gly Asn Glu Ser Tyr Leu
545                 550                 555                 560

Trp Ser Cys Pro His Asn Gly Trp Leu Ser His Asn Cys Gly His Ser
                565                 570                 575

Glu Asp Ala Gly Val Ile Cys Ser Gly Pro Glu Ser Ser Leu Ala Leu
            580                 585                 590

Gly Leu Val Asn Gly Gly Asp Arg Cys Gln Gly Arg Val Glu Val Leu
        595                 600                 605

Tyr Arg Gly Ser Trp Gly Thr Val Cys Asp Asp Ser Trp Asp Thr Asn
    610                 615                 620

Asp Ala Asn Val Val Cys Arg Gln Leu Gly Cys Gly Trp Ala Thr Ser
625                 630                 635                 640

Ala Pro Gly Asn Ala Arg Phe Gly Gln Gly Ser Gly Pro Ile Val Leu
                645                 650                 655

Asp Asp Val Arg Cys Ser Gly His Glu Ser Tyr Leu Trp Ser Cys Pro
            660                 665                 670
```

```
Asn Asn Gly Trp Leu Ser His Asn Cys Gly His His Glu Asp Ala Gly
        675                 680                 685

Val Ile Cys Ser Ala Ala Gln Ser Arg Ser Thr Pro Arg Pro Asp Thr
    690                 695                 700

Leu Ser Thr Ile Thr Leu Pro Pro Ser Thr Val Gly Ser Glu Ser Ser
705                 710                 715                 720

Leu Thr Leu Arg Leu Val Asn Gly Ser Asp Arg Cys Gln Gly Arg Val
                725                 730                 735

Glu Val Leu Tyr Arg Gly Ser Trp Gly Thr Val Cys Asp Asp Ser Trp
            740                 745                 750

Asp Thr Asn Asp Ala Asn Val Val Cys Arg Gln Leu Gly Cys Gly Trp
        755                 760                 765

Ala Thr Ser Ala Pro Gly Asn Ala Arg Phe Gly Gln Gly Ser Gly Pro
    770                 775                 780

Ile Val Leu Asp Asp Val Arg Cys Ser Gly His Glu Ser Tyr Leu Trp
785                 790                 795                 800

Ser Cys Pro His Asn Gly Trp Leu Ser His Asn Cys Gly His His Glu
                805                 810                 815

Asp Ala Gly Val Ile Cys Ser Val Ser Gln Ser Arg Pro Thr Pro Ser
            820                 825                 830

Pro Asp Thr Trp Pro Thr Ser His Ala Ser Thr Ala Gly Ser Glu Ser
        835                 840                 845

Ser Leu Ala Leu Arg Leu Val Asn Gly Gly Asp Arg Cys Gln Gly Arg
    850                 855                 860

Val Glu Val Leu Tyr Arg Gly Ser Trp Gly Thr Val Cys Asp Asp Ser
865                 870                 875                 880

Trp Asp Thr Ser Asp Ala Asn Val Val Cys Arg Arg Leu Gly Cys Gly
                885                 890                 895

Trp Ala Thr Ser Ala Pro Gly Asn Ala Arg Phe Gly Gln Gly Ser Gly
            900                 905                 910
```

```
Pro Ile Val Leu Asp Asp Val Arg Cys Ser Gly Tyr Glu Ser Tyr Leu
        915                 920                 925

Trp Ser Cys Pro His Asn Gly Trp Leu Ser His Asn Cys Gln His Ser
    930                 935                 940

Glu Asp Ala Gly Val Ile Cys Ser Ala Ala His Ser Trp Ser Thr Pro
945                 950                 955                 960

Ser Pro Asp Thr Leu Pro Thr Ile Thr Leu Pro Ala Ser Thr Val Gly
                965                 970                 975

Ser Glu Ser Ser Leu Ala Leu Arg Leu Val Asn Gly Gly Asp Arg Cys
            980                 985                 990

Gln Gly Arg Val Glu Val Leu Tyr  Gln Gly Ser Trp Gly  Thr Val Cys
        995                 1000                1005

Asp Asp  Ser Trp Asp Thr Asn  Asp Ala Asn Val Val  Cys Arg Gln
    1010                1015                1020

Leu Gly  Cys Gly Trp Ala Met  Ser Ala Pro Gly Asn  Ala Arg Phe
    1025                1030                1035

Gly Gln  Gly Ser Gly Pro Ile  Val Leu Asp Asp Val  Arg Cys Ser
    1040                1045                1050

Gly His  Glu Ser Tyr Leu Trp  Ser Cys Pro His Asn  Gly Trp Leu
    1055                1060                1065

Ser His  Asn Cys Gly His Ser  Glu Asp Ala Gly Val  Ile Cys Ser
    1070                1075                1080

Ala Ser  Gln Ser Arg Pro Thr  Pro Ser Pro Asp Thr  Trp Pro Thr
    1085                1090                1095

Ser His  Ala Ser Thr Ala Gly  Ser Glu Ser Ser Leu  Ala Leu Arg
    1100                1105                1110

Leu Val  Asn Gly Gly Asp Arg  Cys Gln Gly Arg Val  Glu Val Leu
    1115                1120                1125
```

```
Tyr Arg  Gly Ser Trp Gly Thr  Val Cys Asp Asp Tyr  Trp Asp Thr
    1130                1135                1140

Asn Asp  Ala Asn Val Val Cys  Arg Gln Leu Gly Cys  Gly Trp Ala
    1145                1150                1155

Met Ser  Ala Pro Gly Asn Ala  Arg Phe Gly Gln Gly  Ser Gly Pro
    1160                1165                1170

Ile Val  Leu Asp Asp Val Arg  Cys Ser Gly His Glu  Ser Tyr Leu
    1175                1180                1185

Trp Ser  Cys Pro His Asp Gly  Trp Leu Ser His Asn  Cys Gly His
    1190                1195                1200

His Glu  Asp Ala Gly Val Ile  Cys Ser Ala Ser Gln  Ser Gln Pro
    1205                1210                1215

Thr Pro  Ser Pro Asp Thr Trp  Pro Thr Ser His Ala  Ser Thr Ala
    1220                1225                1230

Gly Ser  Glu Ser Ser Leu Ala  Leu Arg Leu Val Asn  Gly Gly Asp
    1235                1240                1245

Arg Cys  Gln Gly Arg Val Glu  Val Leu Tyr Arg Gly  Pro Trp Gly
    1250                1255                1260

Thr Val  Cys Asp Asp Tyr Trp  Asp Thr Asn Asp Ala  Asn Val Val
    1265                1270                1275

Cys Arg  Gln Leu Gly Cys Gly  Trp Ala Thr Ser Ala  Pro Gly Asn
    1280                1285                1290

Ala Arg  Phe Gly Gln Gly Ser  Gly Pro Ile Val Leu  Asp Asp Val
    1295                1300                1305

Arg Cys  Ser Gly His Glu Ser  Tyr Leu Trp Ser Cys  Pro His Asn
    1310                1315                1320

Gly Trp  Leu Ser His Asn Cys  Gly His His Glu Asp  Ala Gly Val
    1325                1330                1335

Ile Cys  Ser Ala Ser Gln Ser  Gln Pro Thr Pro Ser  Pro Asp Thr
    1340                1345                1350
```

```
Trp Pro  Thr Ser His Ala Ser  Thr Ala Gly Ser Glu  Ser Ser Leu
    1355                1360                1365

Ala Leu  Arg Leu Val Asn Gly  Gly Asp Arg Cys Gln  Gly Arg Val
    1370                1375                1380

Glu Val  Leu Tyr Arg Gly Ser  Trp Gly Thr Val Cys  Asp Asp Tyr
    1385                1390                1395

Trp Asp  Thr Asn Asp Ala Asn  Val Val Cys Arg Gln  Leu Gly Cys
    1400                1405                1410

Gly Trp  Ala Thr Ser Ala Pro  Gly Ser Ala Arg Phe  Gly Gln Gly
    1415                1420                1425

Ser Gly  Pro Ile Ala Leu Asp  Asp Val Arg Cys Ser  Gly His Glu
    1430                1435                1440

Ser Tyr  Leu Trp Ser Cys Pro  His Asn Gly Trp Leu  Ser His Asn
    1445                1450                1455

Cys Gly  His His Glu Asp Ala  Gly Val Ile Cys Ser  Ala Ser Gln
    1460                1465                1470

Ser Gln  Pro Thr Pro Ser Pro  Asp Thr Trp Pro Thr  Ser Arg Ala
    1475                1480                1485

Ser Thr  Ala Gly Ser Glu Ser  Thr Leu Ala Leu Arg  Leu Val Asn
    1490                1495                1500

Gly Gly  Asp Arg Cys Arg Gly  Arg Val Glu Val Leu  Tyr Gln Gly
    1505                1510                1515

Ser Trp  Gly Thr Val Cys Asp  Asp Tyr Trp Asp Thr  Asn Asp Ala
    1520                1525                1530

Asn Val  Val Cys Arg Gln Leu  Gly Cys Gly Trp Ala  Met Ser Ala
    1535                1540                1545

Pro Gly  Asn Ala Gln Phe Gly  Gln Gly Ser Gly Pro  Ile Val Leu
    1550                1555                1560
```

```
Asp Asp  Val Arg Cys Ser Gly  His Glu Ser Tyr Leu  Trp Ser Cys
    1565                 1570                 1575

Pro His  Asn Gly Trp Leu Ser  His Asn Cys Gly His  His Glu Asp
    1580                 1585                 1590

Ala Gly  Val Ile Cys Ser Ala  Ala Gln Ser Gln Ser  Thr Pro Arg
    1595                 1600                 1605

Pro Asp  Thr Trp Leu Thr Thr  Asn Leu Pro Ala Leu  Thr Val Gly
    1610                 1615                 1620

Ser Glu  Ser Ser Leu Ala Leu  Arg Leu Val Asn Gly  Gly Asp Arg
    1625                 1630                 1635

Cys Arg  Gly Arg Val Glu Val  Leu Tyr Arg Gly Ser  Trp Gly Thr
    1640                 1645                 1650

Val Cys  Asp Asp Ser Trp Asp  Thr Asn Asp Ala Asn  Val Val Cys
    1655                 1660                 1665

Arg Gln  Leu Gly Cys Gly Trp  Ala Met Ser Ala Pro  Gly Asn Ala
    1670                 1675                 1680

Arg Phe  Gly Gln Gly Ser Gly  Pro Ile Val Leu Asp  Asp Val Arg
    1685                 1690                 1695

Cys Ser  Gly Asn Glu Ser Tyr  Leu Trp Ser Cys Pro  His Lys Gly
    1700                 1705                 1710

Trp Leu  Thr His Asn Cys Gly  His His Glu Asp Ala  Gly Val Ile
    1715                 1720                 1725

Cys Ser  Ala Thr Gln Ile Asn  Ser Thr Thr Thr Asp  Trp Trp His
    1730                 1735                 1740

Pro Thr  Thr Thr Thr Thr Ala  Arg Pro Ser Ser Asn  Cys Gly Gly
    1745                 1750                 1755

Phe Leu  Phe Tyr Ala Ser Gly  Thr Phe Ser Ser Pro  Ser Tyr Pro
    1760                 1765                 1770

Ala Tyr  Tyr Pro Asn Asn Ala  Lys Cys Val Trp Glu  Ile Glu Val
    1775                 1780                 1785
```

```
Asn Ser  Gly Tyr Arg Ile Asn  Leu Gly Phe Ser Asn  Leu Lys Leu
    1790                 1795                 1800

Glu Ala  His His Asn Cys Ser  Phe Asp Tyr Val Glu  Ile Phe Asp
    1805                 1810                 1815

Gly Ser  Leu Asn Ser Ser Leu  Leu Leu Gly Lys Ile  Cys Asn Asp
    1820                 1825                 1830

Thr Arg  Gln Ile Phe Thr Ser  Ser Tyr Asn Arg Met  Thr Ile His
    1835                 1840                 1845

Phe Arg  Ser Asp Ile Ser Phe  Gln Asn Thr Gly Phe  Leu Ala Trp
    1850                 1855                 1860

Tyr Asn  Ser Phe Pro Ser Asp  Ala Thr Leu Arg Leu  Val Asn Leu
    1865                 1870                 1875

Asn Ser  Ser Tyr Gly Leu Cys  Ala Gly Arg Val Glu  Ile Tyr His
    1880                 1885                 1890

Gly Gly  Thr Trp Gly Thr Val  Cys Asp Asp Ser Trp  Thr Ile Gln
    1895                 1900                 1905

Glu Ala  Glu Val Val Cys Arg  Gln Leu Gly Cys Gly  Arg Ala Val
    1910                 1915                 1920

Ser Ala  Leu Gly Asn Ala Tyr  Phe Gly Ser Gly Ser  Gly Pro Ile
    1925                 1930                 1935

Thr Leu  Asp Asp Val Glu Cys  Ser Gly Thr Glu Ser  Thr Leu Trp
    1940                 1945                 1950

Gln Cys  Arg Asn Arg Gly Trp  Phe Ser His Asn Cys  Asn His Arg
    1955                 1960                 1965

Glu Asp  Ala Gly Val Ile Cys  Ser Gly Asn His Leu  Ser Thr Pro
    1970                 1975                 1980

Ala Pro  Phe Leu Asn Ile Thr  Arg Pro Asn Thr Asp  Tyr Ser Cys
    1985                 1990                 1995
```

```
Gly Gly  Phe Leu Ser Gln Pro  Ser Gly Asp Phe Ser  Ser Pro Phe
    2000                 2005                 2010

Tyr Pro  Gly Asn Tyr Pro Asn  Asn Ala Lys Cys Val  Trp Asp Ile
    2015                 2020                 2025

Glu Val  Gln Asn Asn Tyr Arg  Val Thr Val Ile Phe  Arg Asp Val
    2030                 2035                 2040

Gln Leu  Glu Gly Gly Cys Asn  Tyr Asp Tyr Ile Glu  Val Phe Asp
    2045                 2050                 2055

Gly Pro  Tyr Arg Ser Ser Pro  Leu Ile Ala Arg Val  Cys Asp Gly
    2060                 2065                 2070

Ala Arg  Gly Ser Phe Thr Ser  Ser Ser Asn Phe Met  Ser Ile Arg
    2075                 2080                 2085

Phe Ile  Ser Asp His Ser Ile  Thr Arg Arg Gly Phe  Arg Ala Glu
    2090                 2095                 2100

Tyr Tyr  Ser Ser Pro Ser Asn  Asp Ser Thr Asn Leu  Leu Cys Leu
    2105                 2110                 2115

Pro Asn  His Met Gln Ala Ser  Val Ser Arg Ser Tyr  Leu Gln Ser
    2120                 2125                 2130

Leu Gly  Phe Ser Ala Ser Asp  Leu Val Ile Ser Thr  Trp Asn Gly
    2135                 2140                 2145

Tyr Tyr  Glu Cys Arg Pro Gln  Ile Thr Pro Asn Leu  Val Ile Phe
    2150                 2155                 2160

Thr Ile  Pro Tyr Ser Gly Cys  Gly Thr Phe Lys Gln  Ala Asp Asn
    2165                 2170                 2175

Asp Thr  Ile Asp Tyr Ser Asn  Phe Leu Thr Ala Ala  Val Ser Gly
    2180                 2185                 2190

Gly Ile  Ile Lys Arg Arg Thr  Asp Leu Arg Ile His  Val Ser Cys
    2195                 2200                 2205

Arg Met  Leu Gln Asn Thr Trp  Val Asp Thr Met Tyr  Ile Ala Asn
    2210                 2215                 2220
```

```
Asp Thr  Ile His Val Ala Asn  Asn Thr Ile Gln Val  Glu Glu Val
    2225                 2230                 2235

Gln Tyr  Gly Asn Phe Asp Val  Asn Ile Ser Phe Tyr  Thr Ser Ser
    2240                 2245                 2250

Ser Phe  Leu Tyr Pro Val Thr  Ser Arg Pro Tyr Tyr  Val Asp Leu
    2255                 2260                 2265

Asn Gln  Asp Leu Tyr Val Gln  Ala Glu Ile Leu His  Ser Asp Ala
    2270                 2275                 2280

Val Leu  Thr Leu Phe Val Asp  Thr Cys Val Ala Ser  Pro Tyr Ser
    2285                 2290                 2295

Asn Asp  Phe Thr Ser Leu Thr  Tyr Asp Leu Ile Arg  Ser Gly Cys
    2300                 2305                 2310

Val Arg  Asp Asp Thr Tyr Gly  Pro Tyr Ser Ser Pro  Ser Leu Arg
    2315                 2320                 2325

Ile Ala  Arg Phe Arg Phe Arg  Ala Phe His Phe Leu  Asn Arg Phe
    2330                 2335                 2340

Pro Ser  Val Tyr Leu Arg Cys  Lys Met Val Val Cys  Arg Ala Tyr
    2345                 2350                 2355

Asp Pro  Ser Ser Arg Cys Tyr  Arg Gly Cys Val Leu  Arg Ser Lys
    2360                 2365                 2370

Arg Asp  Val Gly Ser Tyr Gln  Glu Lys Val Asp Val  Val Leu Gly
    2375                 2380                 2385

Pro Ile  Gln Leu Gln Thr Pro  Pro Arg Arg Glu Glu  Glu Pro Arg
    2390                 2395                 2400
```

<210> 89
<211> 2413
<212> PRT
<213> Homo sapiens

<400> 89

```
Met Gly Ile Ser Thr Val Ile Leu Glu Met Cys Leu Leu Trp Gly Gln
```

```
1               5                   10                  15

Val Leu Ser Thr Gly Gly Trp Ile Pro Arg Thr Thr Asp Tyr Ala Ser
            20                  25                  30

Leu Ile Pro Ser Glu Val Pro Leu Asp Gln Thr Val Ala Glu Gly Ser
        35                  40                  45

Pro Phe Pro Ser Glu Ser Thr Leu Glu Ser Thr Ala Ala Glu Gly Ser
    50                  55                  60

Pro Ile Ser Leu Glu Ser Thr Leu Glu Ser Thr Val Ala Glu Gly Ser
65                  70                  75                  80

Leu Ile Pro Ser Glu Ser Thr Leu Glu Ser Thr Val Ala Glu Gly Ser
                85                  90                  95

Asp Ser Gly Leu Ala Leu Arg Leu Val Asn Gly Asp Gly Arg Cys Gln
            100                 105                 110

Gly Arg Val Glu Ile Leu Tyr Arg Gly Ser Trp Gly Thr Val Cys Asp
        115                 120                 125

Asp Ser Trp Asp Thr Asn Asp Ala Asn Val Val Cys Arg Gln Leu Gly
    130                 135                 140

Cys Gly Trp Ala Met Ser Ala Pro Gly Asn Ala Trp Phe Gly Gln Gly
145                 150                 155                 160

Ser Gly Pro Ile Ala Leu Asp Asp Val Arg Cys Ser Gly His Glu Ser
                165                 170                 175

Tyr Leu Trp Ser Cys Pro His Asn Gly Trp Leu Ser His Asn Cys Gly
            180                 185                 190

His Gly Glu Asp Ala Gly Val Ile Cys Ser Ala Ala Gln Pro Gln Ser
        195                 200                 205

Thr Leu Arg Pro Glu Ser Trp Pro Val Arg Ile Ser Pro Pro Val Pro
    210                 215                 220

Thr Glu Gly Ser Glu Ser Ser Leu Ala Leu Arg Leu Val Asn Gly Gly
225                 230                 235                 240
```

```
Asp Arg Cys Arg Gly Arg Val Glu Val Leu Tyr Arg Gly Ser Trp Gly
                245                 250                 255

Thr Val Cys Asp Asp Tyr Trp Asp Thr Asn Asp Ala Asn Val Val Cys
            260                 265                 270

Arg Gln Leu Gly Cys Gly Trp Ala Met Ser Ala Pro Gly Asn Ala Gln
        275                 280                 285

Phe Gly Gln Gly Ser Gly Pro Ile Val Leu Asp Asp Val Arg Cys Ser
    290                 295                 300

Gly His Glu Ser Tyr Leu Trp Ser Cys Pro His Asn Gly Trp Leu Thr
305                 310                 315                 320

His Asn Cys Gly His Ser Glu Asp Ala Gly Val Ile Cys Ser Ala Pro
                325                 330                 335

Gln Ser Arg Pro Thr Pro Ser Pro Asp Thr Trp Pro Thr Ser His Ala
            340                 345                 350

Ser Thr Ala Gly Pro Glu Ser Ser Leu Ala Leu Arg Leu Val Asn Gly
        355                 360                 365

Gly Asp Arg Cys Gln Gly Arg Val Glu Val Leu Tyr Arg Gly Ser Trp
    370                 375                 380

Gly Thr Val Cys Asp Asp Ser Trp Asp Thr Ser Asp Ala Asn Val Val
385                 390                 395                 400

Cys Arg Gln Leu Gly Cys Gly Trp Ala Thr Ser Ala Pro Gly Asn Ala
                405                 410                 415

Arg Phe Gly Gln Gly Ser Gly Pro Ile Val Leu Asp Asp Val Arg Cys
            420                 425                 430

Ser Gly Tyr Glu Ser Tyr Leu Trp Ser Cys Pro His Asn Gly Trp Leu
        435                 440                 445

Ser His Asn Cys Gln His Ser Glu Asp Ala Gly Val Ile Cys Ser Ala
    450                 455                 460

Ala His Ser Trp Ser Thr Pro Ser Pro Asp Thr Leu Pro Thr Ile Thr
```

```
465                 470                 475                 480

Leu Pro Ala Ser Thr Val Gly Ser Glu Ser Ser Leu Ala Leu Arg Leu
                485                 490                 495

Val Asn Gly Gly Asp Arg Cys Gln Gly Arg Val Glu Val Leu Tyr Arg
            500                 505                 510

Gly Ser Trp Gly Thr Val Cys Asp Asp Ser Trp Asp Thr Asn Asp Ala
        515                 520                 525

Asn Val Val Cys Arg Gln Leu Gly Cys Gly Trp Ala Met Leu Ala Pro
    530                 535                 540

Gly Asn Ala Arg Phe Gly Gln Gly Ser Gly Pro Ile Val Leu Asp Asp
545                 550                 555                 560

Val Arg Cys Ser Gly Asn Glu Ser Tyr Leu Trp Ser Cys Pro His Asn
                565                 570                 575

Gly Trp Leu Ser His Asn Cys Gly His Ser Glu Asp Ala Gly Val Ile
            580                 585                 590

Cys Ser Gly Pro Glu Ser Ser Leu Ala Leu Arg Leu Val Asn Gly Gly
        595                 600                 605

Asp Arg Cys Gln Gly Arg Val Glu Val Leu Tyr Arg Gly Ser Trp Gly
    610                 615                 620

Thr Val Cys Asp Asp Ser Trp Asp Thr Asn Asp Ala Asn Val Val Cys
625                 630                 635                 640

Arg Gln Leu Gly Cys Gly Trp Ala Met Ser Ala Pro Gly Asn Ala Arg
                645                 650                 655

Phe Gly Gln Gly Ser Gly Pro Ile Val Leu Asp Asp Val Arg Cys Ser
            660                 665                 670

Gly His Glu Ser Tyr Leu Trp Ser Cys Pro Asn Asn Gly Trp Leu Ser
        675                 680                 685

His Asn Cys Gly His His Glu Asp Ala Gly Val Ile Cys Ser Ala Ala
    690                 695                 700
```

```
Gln Ser Arg Ser Thr Pro Arg Pro Asp Thr Leu Ser Thr Ile Thr Leu
705                 710                 715                 720

Pro Pro Ser Thr Val Gly Ser Glu Ser Ser Leu Thr Leu Arg Leu Val
                725                 730                 735

Asn Gly Ser Asp Arg Cys Gln Gly Arg Val Glu Val Leu Tyr Arg Gly
            740                 745                 750

Ser Trp Gly Thr Val Cys Asp Asp Ser Trp Asp Thr Asn Asp Ala Asn
        755                 760                 765

Val Val Cys Arg Gln Leu Gly Cys Gly Trp Ala Met Ser Ala Pro Gly
    770                 775                 780

Asn Ala Arg Phe Gly Gln Gly Ser Gly Pro Ile Val Leu Asp Asp Val
785                 790                 795                 800

Arg Cys Ser Gly His Glu Ser Tyr Leu Trp Ser Cys Pro His Asn Gly
                805                 810                 815

Trp Leu Ser His Asn Cys Gly His His Glu Asp Ala Gly Val Ile Cys
            820                 825                 830

Ser Val Ser Gln Ser Arg Pro Thr Pro Ser Pro Asp Thr Trp Pro Thr
        835                 840                 845

Ser His Ala Ser Thr Ala Gly Ser Glu Ser Ser Leu Ala Leu Arg Leu
    850                 855                 860

Val Asn Gly Gly Asp Arg Cys Gln Gly Arg Val Glu Val Leu Tyr Arg
865                 870                 875                 880

Gly Ser Trp Gly Thr Val Cys Asp Asp Ser Trp Asp Thr Ser Asp Ala
                885                 890                 895

Asn Val Val Cys Arg Gln Leu Gly Cys Gly Trp Ala Thr Ser Ala Pro
            900                 905                 910

Gly Asn Ala Arg Phe Gly Gln Gly Ser Gly Pro Ile Val Leu Asp Asp
        915                 920                 925

Val Arg Cys Ser Gly Tyr Glu Ser Tyr Leu Trp Ser Cys Pro His Asn
```

```
    930                 935                 940

Gly Trp Leu Ser His Asn Cys Gln His Ser Glu Asp Ala Gly Val Ile
945                 950                 955                 960

Cys Ser Ala Ala His Ser Trp Ser Thr Pro Ser Pro Asp Thr Leu Pro
                965                 970                 975

Thr Ile Thr Leu Pro Ala Ser Thr Val Gly Ser Glu Ser Ser Leu Ala
            980                 985                 990

Leu Arg Leu Val Asn Gly Gly Asp  Arg Cys Gln Gly Arg  Val Glu Val
        995                 1000                1005

Leu Tyr  Gln Gly Ser Trp Gly  Thr Val Cys Asp Asp  Ser Trp Asp
    1010                1015                1020

Thr Asn  Asp Ala Asn Val Val  Cys Arg Gln Pro Gly  Cys Gly Trp
    1025                1030                1035

Ala Met  Ser Ala Pro Gly Asn  Ala Arg Phe Gly Gln  Gly Ser Gly
    1040                1045                1050

Pro Ile  Val Leu Asp Asp Val  Arg Cys Ser Gly His  Glu Ser Tyr
    1055                1060                1065

Pro Trp  Ser Cys Pro His Asn  Gly Trp Leu Ser His  Asn Cys Gly
    1070                1075                1080

His Ser  Glu Asp Ala Gly Val  Ile Cys Ser Ala Ser  Gln Ser Arg
    1085                1090                1095

Pro Thr  Pro Ser Pro Asp Thr  Trp Pro Thr Ser His  Ala Ser Thr
    1100                1105                1110

Ala Gly  Ser Glu Ser Ser Leu  Ala Leu Arg Leu Val  Asn Gly Gly
    1115                1120                1125

Asp Arg  Cys Gln Gly Arg Val  Glu Val Leu Tyr Arg  Gly Ser Trp
    1130                1135                1140

Gly Thr  Val Cys Asp Asp Tyr  Trp Asp Thr Asn Asp  Ala Asn Val
    1145                1150                1155
```

```
Val Cys  Arg Gln Leu Gly Cys  Gly Trp Ala Met Ser  Ala Pro Gly
    1160                1165                1170

Asn Ala  Arg Phe Gly Gln Gly  Ser Gly Pro Ile Val  Leu Asp Asp
    1175                1180                1185

Val Arg  Cys Ser Gly His Glu  Ser Tyr Leu Trp Ser  Cys Pro His
    1190                1195                1200

Asn Gly  Trp Leu Ser His Asn  Cys Gly His His Glu  Asp Ala Gly
    1205                1210                1215

Val Ile  Cys Ser Ala Ser Gln  Ser Gln Pro Thr Pro  Ser Pro Asp
    1220                1225                1230

Thr Trp  Pro Thr Ser His Ala  Ser Thr Ala Gly Ser  Glu Ser Ser
    1235                1240                1245

Leu Ala  Leu Arg Leu Val Asn  Gly Gly Asp Arg Cys  Gln Gly Arg
    1250                1255                1260

Val Glu  Val Leu Tyr Arg Gly  Ser Trp Gly Thr Val  Cys Asp Asp
    1265                1270                1275

Tyr Trp  Asp Thr Asn Asp Ala  Asn Val Val Cys Arg  Gln Leu Gly
    1280                1285                1290

Cys Gly  Trp Ala Thr Ser Ala  Pro Gly Asn Ala Arg  Phe Gly Gln
    1295                1300                1305

Gly Ser  Gly Pro Ile Val Leu  Asp Asp Val Arg Cys  Ser Gly His
    1310                1315                1320

Glu Ser  Tyr Leu Trp Ser Cys  Pro His Asn Gly Trp  Leu Ser His
    1325                1330                1335

Asn Cys  Gly His His Glu Asp  Ala Gly Val Ile Cys  Ser Ala Ser
    1340                1345                1350

Gln Ser  Gln Pro Thr Pro Ser  Pro Asp Thr Trp Pro  Thr Ser His
    1355                1360                1365

Ala Ser  Thr Ala Gly Ser Glu  Ser Ser Leu Ala Leu  Arg Leu Val
```

```
    1370                1375                1380

Asn Gly  Gly Asp Arg Cys Gln  Gly Arg Val Glu Val  Leu Tyr Arg
    1385                1390                1395

Gly Ser  Trp Gly Thr Val Cys  Asp Asp Tyr Trp Asp  Thr Asn Asp
    1400                1405                1410

Ala Asn  Val Val Cys Arg Gln  Leu Gly Cys Gly Trp  Ala Thr Ser
    1415                1420                1425

Ala Pro  Gly Asn Ala Arg Phe  Gly Gln Gly Ser Gly  Pro Ile Val
    1430                1435                1440

Leu Asp  Asp Val Arg Cys Ser  Gly His Glu Ser Tyr  Leu Trp Ser
    1445                1450                1455

Cys Pro  His Asn Gly Trp Leu  Ser His Asn Cys Gly  His His Glu
    1460                1465                1470

Asp Ala  Gly Val Ile Cys Ser  Ala Ser Gln Ser Gln  Pro Thr Pro
    1475                1480                1485

Ser Pro  Asp Thr Trp Pro Thr  Ser Arg Ala Ser Thr  Ala Gly Ser
    1490                1495                1500

Glu Ser  Thr Leu Ala Leu Arg  Leu Val Asn Gly Gly  Asp Arg Cys
    1505                1510                1515

Arg Gly  Arg Val Glu Val Leu  Tyr Gln Gly Ser Trp  Gly Thr Val
    1520                1525                1530

Cys Asp  Asp Tyr Trp Asp Thr  Asn Asp Ala Asn Val  Val Cys Arg
    1535                1540                1545

Gln Leu  Gly Cys Gly Trp Ala  Met Ser Ala Pro Gly  Asn Ala Gln
    1550                1555                1560

Phe Gly  Gln Gly Ser Gly Pro  Ile Val Leu Asp Asp  Val Arg Cys
    1565                1570                1575

Ser Gly  His Glu Ser Tyr Leu  Trp Ser Cys Pro His  Asn Gly Trp
    1580                1585                1590
```

```
Leu Ser  His Asn Cys Gly His  His Glu Asp Ala Gly  Val Ile Cys
    1595                 1600                 1605

Ser Ala  Ala Gln Ser Gln Ser  Thr Pro Arg Pro Asp  Thr Trp Leu
    1610                 1615                 1620

Thr Thr  Asn Leu Pro Ala Leu  Thr Val Gly Ser Glu  Ser Ser Leu
    1625                 1630                 1635

Ala Leu  Arg Leu Val Asn Gly  Gly Asp Arg Cys Arg  Gly Arg Val
    1640                 1645                 1650

Glu Val  Leu Tyr Arg Gly Ser  Trp Gly Thr Val Cys  Asp Asp Ser
    1655                 1660                 1665

Trp Asp  Thr Asn Asp Ala Asn  Val Val Cys Arg Gln  Leu Gly Cys
    1670                 1675                 1680

Gly Trp  Ala Met Ser Ala Pro  Gly Asn Ala Arg Phe  Gly Gln Gly
    1685                 1690                 1695

Ser Gly  Pro Ile Val Leu Asp  Asp Val Arg Cys Ser  Gly Asn Glu
    1700                 1705                 1710

Ser Tyr  Leu Trp Ser Cys Pro  His Lys Gly Trp Leu  Thr His Asn
    1715                 1720                 1725

Cys Gly  His His Glu Asp Ala  Gly Val Ile Cys Ser  Ala Thr Gln
    1730                 1735                 1740

Ile Asn  Ser Thr Thr Thr Asp  Trp Trp His Pro Thr  Thr Thr Thr
    1745                 1750                 1755

Thr Ala  Arg Pro Ser Ser Asn  Cys Gly Gly Phe Leu  Phe Tyr Ala
    1760                 1765                 1770

Ser Gly  Thr Phe Ser Ser Pro  Ser Tyr Pro Ala Tyr  Tyr Pro Asn
    1775                 1780                 1785

Asn Ala  Lys Cys Val Trp Glu  Ile Glu Val Asn Ser  Gly Tyr Arg
    1790                 1795                 1800

Ile Asn  Leu Gly Phe Ser Asn  Leu Lys Leu Glu Ala  His His Asn
```

```
    1805                1810                1815

Cys Ser  Phe Asp Tyr Val Glu  Ile Phe Asp Gly Ser  Leu Asn Ser
    1820                1825                1830

Ser Leu  Leu Leu Gly Lys Ile  Cys Asn Asp Thr Arg  Gln Ile Phe
    1835                1840                1845

Thr Ser  Ser Tyr Asn Arg Met  Thr Ile His Phe Arg  Ser Asp Ile
    1850                1855                1860

Ser Phe  Gln Asn Thr Gly Phe  Leu Ala Trp Tyr Asn  Ser Phe Pro
    1865                1870                1875

Ser Asp  Ala Thr Leu Arg Leu  Val Asn Leu Asn Ser  Ser Tyr Gly
    1880                1885                1890

Leu Cys  Ala Gly Arg Val Glu  Ile Tyr His Gly Gly  Thr Trp Gly
    1895                1900                1905

Thr Val  Cys Asp Asp Ser Trp  Thr Ile Gln Glu Ala  Glu Val Val
    1910                1915                1920

Cys Arg  Gln Leu Gly Cys Gly  Arg Ala Val Ser Ala  Leu Gly Asn
    1925                1930                1935

Ala Tyr  Phe Gly Ser Gly Ser  Gly Pro Ile Thr Leu  Asp Asp Val
    1940                1945                1950

Glu Cys  Ser Gly Thr Glu Ser  Thr Leu Trp Gln Cys  Arg Asn Arg
    1955                1960                1965

Gly Trp  Phe Ser His Asn Cys  Asn His Arg Glu Asp  Ala Gly Val
    1970                1975                1980

Ile Cys  Ser Gly Asn His Leu  Ser Thr Pro Ala Pro  Phe Leu Asn
    1985                1990                1995

Ile Thr  Arg Pro Asn Thr Asp  Tyr Ser Cys Gly Gly  Phe Leu Ser
    2000                2005                2010

Gln Pro  Ser Gly Asp Phe Ser  Ser Pro Phe Tyr Pro  Gly Asn Tyr
    2015                2020                2025
```

```
Pro Asn  Asn Ala Lys Cys Val  Trp Asp Ile Glu Val  Gln Asn Asn
    2030                2035                2040

Tyr Arg  Val Thr Val Ile Phe  Arg Asp Val Gln Leu  Glu Gly Gly
    2045                2050                2055

Cys Asn  Tyr Asp Tyr Ile Glu  Val Phe Asp Gly Pro  Tyr Arg Ser
    2060                2065                2070

Ser Pro  Leu Ile Ala Arg Val  Cys Asp Gly Ala Arg  Gly Ser Phe
    2075                2080                2085

Thr Ser  Ser Ser Asn Phe Met  Ser Ile Arg Phe Ile  Ser Asp His
    2090                2095                2100

Ser Ile  Thr Arg Arg Gly Phe  Arg Ala Glu Tyr Tyr  Ser Ser Pro
    2105                2110                2115

Ser Asn  Asp Ser Thr Asn Leu  Leu Cys Leu Pro Asn  His Met Gln
    2120                2125                2130

Ala Ser  Val Ser Arg Ser Tyr  Leu Gln Ser Leu Gly  Phe Ser Ala
    2135                2140                2145

Ser Asp  Leu Val Ile Ser Thr  Trp Asn Gly Tyr Tyr  Glu Cys Arg
    2150                2155                2160

Pro Gln  Ile Thr Pro Asn Leu  Val Ile Phe Thr Ile  Pro Tyr Ser
    2165                2170                2175

Gly Cys  Gly Thr Phe Lys Gln  Ala Asp Asn Asp Thr  Ile Asp Tyr
    2180                2185                2190

Ser Asn  Phe Leu Thr Ala Ala  Val Ser Gly Gly Ile  Ile Lys Arg
    2195                2200                2205

Arg Thr  Asp Leu Arg Ile His  Val Ser Cys Arg Met  Leu Gln Asn
    2210                2215                2220

Thr Trp  Val Asp Thr Met Tyr  Ile Ala Asn Asp Thr  Ile His Val
    2225                2230                2235

Ala Asn  Asn Thr Ile Gln Val  Glu Glu Val Gln Tyr  Gly Asn Phe
```

```
    2240                2245                2250

Asp Val  Asn Ile Ser Phe Tyr  Thr Ser Ser Ser Phe  Leu Tyr Pro
    2255                2260                2265

Val Thr  Ser Arg Pro Tyr Tyr  Val Asp Leu Asn Gln  Asp Leu Tyr
    2270                2275                2280

Val Gln  Ala Glu Ile Leu His  Ser Asp Ala Val Leu  Thr Leu Phe
    2285                2290                2295

Val Asp  Thr Cys Val Ala Ser  Pro Tyr Ser Asn Asp  Phe Thr Ser
    2300                2305                2310

Leu Thr  Tyr Asp Leu Ile Arg  Ser Gly Cys Val Arg  Asp Asp Thr
    2315                2320                2325

Tyr Gly  Pro Tyr Ser Ser Pro  Ser Leu Arg Ile Ala  Arg Phe Arg
    2330                2335                2340

Phe Arg  Ala Phe His Phe Leu  Asn Arg Phe Pro Ser  Val Tyr Leu
    2345                2350                2355

Arg Cys  Lys Met Val Val Cys  Arg Ala Tyr Asp Pro  Ser Ser Arg
    2360                2365                2370

Cys Tyr  Arg Gly Cys Val Leu  Arg Ser Lys Arg Asp  Val Gly Ser
    2375                2380                2385

Tyr Gln  Glu Lys Val Asp Val  Val Leu Gly Pro Ile  Gln Leu Gln
    2390                2395                2400

Thr Pro  Pro Arg Arg Glu Glu  Glu Pro Arg
    2405                2410
```

<210> 90
<211> 1785
<212> PRT
<213> Homo sapiens

<400> 90

```
Met Gly Ile Ser Thr Val Ile Leu Glu Met Cys Leu Leu Trp Gly Gln
1               5                  10                  15
```

```
Val Leu Ser Thr Gly Gly Trp Ile Pro Arg Thr Thr Asp Tyr Ala Ser
            20                  25                  30

Leu Ile Pro Ser Glu Val Pro Leu Asp Gln Thr Val Ala Glu Gly Ser
        35                  40                  45

Pro Phe Pro Ser Glu Ser Thr Leu Glu Ser Thr Ala Ala Glu Gly Ser
    50                  55                  60

Pro Ile Ser Leu Glu Ser Thr Leu Glu Ser Thr Val Ala Glu Gly Ser
65                  70                  75                  80

Leu Ile Pro Ser Glu Ser Thr Leu Glu Ser Thr Val Ala Glu Gly Ser
                85                  90                  95

Asp Ser Gly Leu Ala Leu Arg Leu Val Asn Gly Asp Gly Arg Cys Gln
            100                 105                 110

Gly Arg Val Glu Ile Leu Tyr Arg Gly Ser Trp Gly Thr Val Cys Asp
        115                 120                 125

Asp Ser Trp Asp Thr Asn Asp Ala Asn Val Val Cys Arg Gln Leu Gly
    130                 135                 140

Cys Gly Trp Ala Met Ser Ala Pro Gly Asn Ala Trp Phe Gly Gln Gly
145                 150                 155                 160

Ser Gly Pro Ile Ala Leu Asp Asp Val Arg Cys Ser Gly His Glu Ser
                165                 170                 175

Tyr Leu Trp Ser Cys Pro His Asn Gly Trp Leu Ser His Asn Cys Gly
            180                 185                 190

His Gly Glu Asp Ala Gly Val Ile Cys Ser Ala Ala Gln Pro Gln Ser
        195                 200                 205

Thr Leu Arg Pro Glu Ser Trp Pro Val Arg Ile Ser Pro Pro Val Pro
    210                 215                 220

Thr Glu Gly Ser Glu Ser Ser Leu Ala Leu Arg Leu Val Asn Gly Gly
225                 230                 235                 240

Asp Arg Cys Arg Gly Arg Val Glu Val Leu Tyr Arg Gly Ser Trp Gly
                245                 250                 255
```

```
Thr Val Cys Asp Asp Tyr Trp Asp Thr Asn Asp Ala Asn Val Val Cys
            260                 265                 270

Arg Gln Leu Gly Cys Gly Trp Ala Met Ser Ala Pro Gly Asn Ala Gln
        275                 280                 285

Phe Gly Gln Gly Ser Gly Pro Ile Val Leu Asp Asp Val Arg Cys Ser
    290                 295                 300

Gly His Glu Ser Tyr Leu Trp Ser Cys Pro His Asn Gly Trp Leu Thr
305                 310                 315                 320

His Asn Cys Gly His Ser Glu Asp Ala Gly Val Ile Cys Ser Ala Pro
                325                 330                 335

Gln Ser Arg Pro Thr Pro Ser Pro Asp Thr Trp Pro Thr Ser His Ala
            340                 345                 350

Ser Thr Ala Gly Pro Glu Ser Ser Leu Ala Leu Arg Leu Val Asn Gly
        355                 360                 365

Gly Asp Arg Cys Gln Gly Arg Val Glu Val Leu Tyr Arg Gly Ser Trp
    370                 375                 380

Gly Thr Val Cys Asp Asp Ser Trp Asp Thr Ser Asp Ala Asn Val Val
385                 390                 395                 400

Cys Arg Gln Leu Gly Cys Gly Trp Ala Thr Ser Ala Pro Gly Asn Ala
                405                 410                 415

Arg Phe Gly Gln Gly Ser Gly Pro Ile Val Leu Asp Asp Val Arg Cys
            420                 425                 430

Ser Gly Tyr Glu Ser Tyr Leu Trp Ser Cys Pro His Asn Gly Trp Leu
        435                 440                 445

Ser His Asn Cys Gln His Ser Glu Asp Ala Gly Val Ile Cys Ser Ala
    450                 455                 460

Ala His Ser Trp Ser Thr Pro Ser Pro Asp Thr Leu Pro Thr Ile Thr
465                 470                 475                 480
```

```
Leu Pro Ala Ser Thr Val Gly Ser Glu Ser Ser Leu Ala Leu Arg Leu
                485                 490                 495

Val Asn Gly Gly Asp Arg Cys Gln Gly Arg Val Glu Val Leu Tyr Gln
            500                 505                 510

Gly Ser Trp Gly Thr Val Cys Asp Asp Ser Trp Asp Thr Asn Asp Ala
        515                 520                 525

Asn Val Val Cys Arg Gln Pro Gly Cys Gly Trp Ala Met Ser Ala Pro
    530                 535                 540

Gly Asn Ala Arg Phe Gly Gln Gly Ser Gly Pro Ile Val Leu Asp Asp
545                 550                 555                 560

Val Arg Cys Ser Gly His Glu Ser Tyr Pro Trp Ser Cys Pro His Asn
                565                 570                 575

Gly Trp Leu Ser His Asn Cys Gly His Ser Glu Asp Ala Gly Val Ile
            580                 585                 590

Cys Ser Ala Ser Gln Ser Arg Pro Thr Pro Ser Pro Asp Thr Trp Pro
        595                 600                 605

Thr Ser His Ala Ser Thr Ala Gly Ser Glu Ser Ser Leu Ala Leu Arg
    610                 615                 620

Leu Val Asn Gly Gly Asp Arg Cys Gln Gly Arg Val Glu Val Leu Tyr
625                 630                 635                 640

Arg Gly Ser Trp Gly Thr Val Cys Asp Asp Tyr Trp Asp Thr Asn Asp
                645                 650                 655

Ala Asn Val Val Cys Arg Gln Leu Gly Cys Gly Trp Ala Met Ser Ala
            660                 665                 670

Pro Gly Asn Ala Arg Phe Gly Gln Gly Ser Gly Pro Ile Val Leu Asp
        675                 680                 685

Asp Val Arg Cys Ser Gly His Glu Ser Tyr Leu Trp Ser Cys Pro His
    690                 695                 700

Asn Gly Trp Leu Ser His Asn Cys Gly His His Glu Asp Ala Gly Val
705                 710                 715                 720
```

```
Ile Cys Ser Ala Ser Gln Ser Gln Pro Thr Pro Ser Pro Asp Thr Trp
                725                 730                 735

Pro Thr Ser His Ala Ser Thr Ala Gly Ser Glu Ser Ser Leu Ala Leu
            740                 745                 750

Arg Leu Val Asn Gly Gly Asp Arg Cys Gln Gly Arg Val Glu Val Leu
        755                 760                 765

Tyr Arg Gly Ser Trp Gly Thr Val Cys Asp Asp Tyr Trp Asp Thr Asn
    770                 775                 780

Asp Ala Asn Val Val Cys Arg Gln Leu Gly Cys Gly Trp Ala Thr Ser
785                 790                 795                 800

Ala Pro Gly Asn Ala Arg Phe Gly Gln Gly Ser Gly Pro Ile Val Leu
                805                 810                 815

Asp Asp Val Arg Cys Ser Gly His Glu Ser Tyr Leu Trp Ser Cys Pro
            820                 825                 830

His Asn Gly Trp Leu Ser His Asn Cys Gly His His Glu Asp Ala Gly
        835                 840                 845

Val Ile Cys Ser Ala Ser Gln Ser Gln Pro Thr Pro Ser Pro Asp Thr
    850                 855                 860

Trp Pro Thr Ser Arg Ala Ser Thr Ala Gly Ser Glu Ser Thr Leu Ala
865                 870                 875                 880

Leu Arg Leu Val Asn Gly Gly Asp Arg Cys Arg Gly Arg Val Glu Val
                885                 890                 895

Leu Tyr Gln Gly Ser Trp Gly Thr Val Cys Asp Asp Tyr Trp Asp Thr
            900                 905                 910

Asn Asp Ala Asn Val Val Cys Arg Gln Leu Gly Cys Gly Trp Ala Met
        915                 920                 925

Ser Ala Pro Gly Asn Ala Gln Phe Gly Gln Gly Ser Gly Pro Ile Val
    930                 935                 940
```

```
Leu Asp Asp Val Arg Cys Ser Gly His Glu Ser Tyr Leu Trp Ser Cys
945                 950                 955                 960

Pro His Asn Gly Trp Leu Ser His Asn Cys Gly His His Glu Asp Ala
                965                 970                 975

Gly Val Ile Cys Ser Ala Ala Gln Ser Gln Ser Thr Pro Arg Pro Asp
            980                 985                 990

Thr Trp Leu Thr Thr Asn Leu Pro  Ala Leu Thr Val Gly  Ser Glu Ser
        995                 1000                1005

Ser Leu  Ala Leu Arg Leu Val  Asn Gly Gly Asp Arg  Cys Arg Gly
    1010                1015                1020

Arg Val  Glu Val Leu Tyr Arg  Gly Ser Trp Gly Thr  Val Cys Asp
    1025                1030                1035

Asp Ser  Trp Asp Thr Asn Asp  Ala Asn Val Val Cys  Arg Gln Leu
    1040                1045                1050

Gly Cys  Gly Trp Ala Met Ser  Ala Pro Gly Asn Ala  Arg Phe Gly
    1055                1060                1065

Gln Gly  Ser Gly Pro Ile Val  Leu Asp Asp Val Arg  Cys Ser Gly
    1070                1075                1080

Asn Glu  Ser Tyr Leu Trp Ser  Cys Pro His Lys Gly  Trp Leu Thr
    1085                1090                1095

His Asn  Cys Gly His His Glu  Asp Ala Gly Val Ile  Cys Ser Ala
    1100                1105                1110

Thr Gln  Ile Asn Ser Thr Thr  Thr Asp Trp Trp His  Pro Thr Thr
    1115                1120                1125

Thr Thr  Thr Ala Arg Pro Ser  Ser Asn Cys Gly Gly  Phe Leu Phe
    1130                1135                1140

Tyr Ala  Ser Gly Thr Phe Ser  Ser Pro Ser Tyr Pro  Ala Tyr Tyr
    1145                1150                1155

Pro Asn  Asn Ala Lys Cys Val  Trp Glu Ile Glu Val  Asn Ser Gly
    1160                1165                1170
```

```
Tyr Arg  Ile Asn Leu Gly Phe  Ser Asn Leu Lys Leu  Glu Ala His
    1175                1180                1185

His Asn  Cys Ser Phe Asp Tyr  Val Glu Ile Phe Asp  Gly Ser Leu
    1190                1195                1200

Asn Ser  Ser Leu Leu Leu Gly  Lys Ile Cys Asn Asp  Thr Arg Gln
    1205                1210                1215

Ile Phe  Thr Ser Ser Tyr Asn  Arg Met Thr Ile His  Phe Arg Ser
    1220                1225                1230

Asp Ile  Ser Phe Gln Asn Thr  Gly Phe Leu Ala Trp  Tyr Asn Ser
    1235                1240                1245

Phe Pro  Ser Asp Ala Thr Leu  Arg Leu Val Asn Leu  Asn Ser Ser
    1250                1255                1260

Tyr Gly  Leu Cys Ala Gly Arg  Val Glu Ile Tyr His  Gly Gly Thr
    1265                1270                1275

Trp Gly  Thr Val Cys Asp Asp  Ser Trp Thr Ile Gln  Glu Ala Glu
    1280                1285                1290

Val Val  Cys Arg Gln Leu Gly  Cys Gly Arg Ala Val  Ser Ala Leu
    1295                1300                1305

Gly Asn  Ala Tyr Phe Gly Ser  Gly Ser Gly Pro Ile  Thr Leu Asp
    1310                1315                1320

Asp Val  Glu Cys Ser Gly Thr  Glu Ser Thr Leu Trp  Gln Cys Arg
    1325                1330                1335

Asn Arg  Gly Trp Phe Ser His  Asn Cys Asn His Arg  Glu Asp Ala
    1340                1345                1350

Gly Val  Ile Cys Ser Gly Asn  His Leu Ser Thr Pro  Ala Pro Phe
    1355                1360                1365

Leu Asn  Ile Thr Arg Pro Asn  Thr Asp Tyr Ser Cys  Gly Gly Phe
    1370                1375                1380
```

```
Leu Ser  Gln Pro Ser Gly Asp  Phe Ser Ser Pro Phe  Tyr Pro Gly
    1385                 1390                 1395

Asn Tyr  Pro Asn Asn Ala Lys  Cys Val Trp Asp Ile  Glu Val Gln
    1400                 1405                 1410

Asn Asn  Tyr Arg Val Thr Val  Ile Phe Arg Asp Val  Gln Leu Glu
    1415                 1420                 1425

Gly Gly  Cys Asn Tyr Asp Tyr  Ile Glu Val Phe Asp  Gly Pro Tyr
    1430                 1435                 1440

Arg Ser  Ser Pro Leu Ile Ala  Arg Val Cys Asp Gly  Ala Arg Gly
    1445                 1450                 1455

Ser Phe  Thr Ser Ser Ser Asn  Phe Met Ser Ile Arg  Phe Ile Ser
    1460                 1465                 1470

Asp His  Ser Ile Thr Arg Arg  Gly Phe Arg Ala Glu  Tyr Tyr Ser
    1475                 1480                 1485

Ser Pro  Ser Asn Asp Ser Thr  Asn Leu Leu Cys Leu  Pro Asn His
    1490                 1495                 1500

Met Gln  Ala Ser Val Ser Arg  Ser Tyr Leu Gln Ser  Leu Gly Phe
    1505                 1510                 1515

Ser Ala  Ser Asp Leu Val Ile  Ser Thr Trp Asn Gly  Tyr Tyr Glu
    1520                 1525                 1530

Cys Arg  Pro Gln Ile Thr Pro  Asn Leu Val Ile Phe  Thr Ile Pro
    1535                 1540                 1545

Tyr Ser  Gly Cys Gly Thr Phe  Lys Gln Ala Asp Asn  Asp Thr Ile
    1550                 1555                 1560

Asp Tyr  Ser Asn Phe Leu Thr  Ala Ala Val Ser Gly  Gly Ile Ile
    1565                 1570                 1575

Lys Arg  Arg Thr Asp Leu Arg  Ile His Val Ser Cys  Arg Met Leu
    1580                 1585                 1590

Gln Asn  Thr Trp Val Asp Thr  Met Tyr Ile Ala Asn  Asp Thr Ile
    1595                 1600                 1605
```

```
His Val  Ala Asn Asn Thr Ile  Gln Val Glu Glu Val  Gln Tyr Gly
    1610                 1615                 1620

Asn Phe  Asp Val Asn Ile Ser  Phe Tyr Thr Ser Ser  Ser Phe Leu
    1625                 1630                 1635

Tyr Pro  Val Thr Ser Arg Pro  Tyr Tyr Val Asp Leu  Asn Gln Asp
    1640                 1645                 1650

Leu Tyr  Val Gln Ala Glu Ile  Leu His Ser Asp Ala  Val Leu Thr
    1655                 1660                 1665

Leu Phe  Val Asp Thr Cys Val  Ala Ser Pro Tyr Ser  Asn Asp Phe
    1670                 1675                 1680

Thr Ser  Leu Thr Tyr Asp Leu  Ile Arg Ser Gly Cys  Val Arg Asp
    1685                 1690                 1695

Asp Thr  Tyr Gly Pro Tyr Ser  Ser Pro Ser Leu Arg  Ile Ala Arg
    1700                 1705                 1710

Phe Arg  Phe Arg Ala Phe His  Phe Leu Asn Arg Phe  Pro Ser Val
    1715                 1720                 1725

Tyr Leu  Arg Cys Lys Met Val  Val Cys Arg Ala Tyr  Asp Pro Ser
    1730                 1735                 1740

Ser Arg  Cys Tyr Arg Gly Cys  Val Leu Arg Ser Lys  Arg Asp Val
    1745                 1750                 1755

Gly Ser  Tyr Gln Glu Lys Val  Asp Val Val Leu Gly  Pro Ile Gln
    1760                 1765                 1770

Leu Gln  Thr Pro Pro Arg Arg  Glu Glu Glu Pro Arg
    1775                 1780                 1785
```

<210> 91
<211> 34
<212> PRT
<213> Bos taurus

<400> 91

Leu Ile Pro Cys Cys Pro Val Asn Ile Lys Arg Leu Leu Ile Val Val

```
1               5                   10                  15

Val Val Val Val Leu Leu Val Val Val Ile Val Gly Ala Leu Leu Met
            20                  25                  30

Gly Leu
```

<210> 92
<211> 35
<212> PRT
<213> Canis familiaris

<400> 92

```
Leu Gly Ile Pro Cys Phe Pro Ser Ser Leu Lys Arg Leu Leu Ile Ile
1               5                   10                  15

Val Val Val Ile Val Leu Val Val Val Val Ile Val Gly Ala Leu Leu
            20                  25                  30

Met Gly Leu
        35
```

<210> 93
<211> 371
<212> PRT
<213> Bos taurus

<400> 93

```
Met Leu Leu Leu Pro Leu Ser Val Leu Leu Leu Leu Thr Gln Pro Trp
1               5                   10                  15

Arg Ser Leu Gly Ala Glu Met Thr Thr Phe Ser Gln Lys Ile Leu Ala
            20                  25                  30

Asn Ala Cys Thr Leu Val Met Cys Ser Pro Leu Glu Ser Gly Leu Pro
        35                  40                  45

Gly His Asp Gly Gln Asp Gly Arg Glu Cys Pro His Gly Glu Lys Gly
    50                  55                  60

Asp Pro Gly Ser Pro Gly Pro Ala Gly Arg Ala Gly Arg Pro Gly Trp
65                  70                  75                  80

Val Gly Pro Ile Gly Pro Lys Gly Asp Asn Gly Phe Val Gly Glu Pro
```

```
                85                  90                  95

Gly Pro Lys Gly Asp Thr Gly Pro Arg Gly Pro Pro Gly Met Pro Gly
            100                 105                 110

Pro Ala Gly Arg Glu Gly Pro Ser Gly Lys Gln Gly Ser Met Gly Pro
        115                 120                 125

Pro Gly Thr Pro Gly Pro Lys Gly Glu Thr Gly Pro Lys Gly Gly Val
    130                 135                 140

Gly Ala Pro Gly Ile Gln Gly Phe Pro Gly Pro Ser Gly Leu Lys Gly
145                 150                 155                 160

Glu Lys Gly Ala Pro Gly Glu Thr Gly Ala Pro Gly Arg Ala Gly Val
                165                 170                 175

Thr Gly Pro Ser Gly Ala Ile Gly Pro Gln Gly Pro Ser Gly Ala Arg
            180                 185                 190

Gly Pro Pro Gly Leu Lys Gly Asp Arg Gly Asp Pro Gly Glu Thr Gly
        195                 200                 205

Ala Lys Gly Glu Ser Gly Leu Ala Glu Val Asn Ala Leu Lys Gln Arg
    210                 215                 220

Val Thr Ile Leu Asp Gly His Leu Arg Arg Phe Gln Asn Ala Phe Ser
225                 230                 235                 240

Gln Tyr Lys Lys Ala Val Leu Phe Pro Asp Gly Gln Ala Val Gly Glu
                245                 250                 255

Lys Ile Phe Lys Thr Ala Gly Ala Val Lys Ser Tyr Ser Asp Ala Glu
            260                 265                 270

Gln Leu Cys Arg Glu Ala Lys Gly Gln Leu Ala Ser Pro Arg Ser Ser
        275                 280                 285

Ala Glu Asn Glu Ala Val Thr Gln Met Val Arg Ala Gln Glu Lys Asn
    290                 295                 300

Ala Tyr Leu Ser Met Asn Asp Ile Ser Thr Glu Gly Arg Phe Thr Tyr
305                 310                 315                 320
```

```
Pro Thr Gly Glu Ile Leu Val Tyr Ser Asn Trp Ala Asp Gly Glu Pro
                325                 330                 335

Asn Asn Ser Asp Glu Gly Gln Pro Glu Asn Cys Val Glu Ile Phe Pro
            340                 345                 350

Asp Gly Lys Trp Asn Asp Val Pro Cys Ser Lys Gln Leu Leu Val Ile
        355                 360                 365

Cys Glu Phe
    370
```

<210> 94
<211> 375
<212> PRT
<213> Homo sapiens

<400> 94

```
Met Leu Leu Phe Leu Leu Ser Ala Leu Val Leu Leu Thr Gln Pro Leu
1               5                   10                  15

Gly Tyr Leu Glu Ala Glu Met Lys Thr Tyr Ser His Arg Thr Met Pro
            20                  25                  30

Ser Ala Cys Thr Leu Val Met Cys Ser Ser Val Glu Ser Gly Leu Pro
        35                  40                  45

Gly Arg Asp Gly Arg Asp Gly Arg Glu Gly Pro Arg Gly Glu Lys Gly
    50                  55                  60

Asp Pro Gly Leu Pro Gly Ala Ala Gly Gln Ala Gly Met Pro Gly Gln
65                  70                  75                  80

Ala Gly Pro Val Gly Pro Lys Gly Asp Asn Gly Ser Val Gly Glu Pro
                85                  90                  95

Gly Pro Lys Gly Asp Thr Gly Pro Ser Gly Pro Pro Gly Pro Pro Gly
            100                 105                 110

Val Pro Gly Pro Ala Gly Arg Glu Gly Ala Leu Gly Lys Gln Gly Asn
        115                 120                 125

Ile Gly Pro Gln Gly Lys Pro Gly Pro Lys Gly Glu Ala Gly Pro Lys
    130                 135                 140
```

```
Gly Glu Val Gly Ala Pro Gly Met Gln Gly Ser Ala Gly Ala Arg Gly
145                 150                 155                 160

Leu Ala Gly Pro Lys Gly Glu Arg Gly Val Pro Gly Glu Arg Gly Val
                165                 170                 175

Pro Gly Asn Thr Gly Ala Ala Gly Ser Ala Gly Ala Met Gly Pro Gln
            180                 185                 190

Gly Ser Pro Gly Ala Arg Gly Pro Pro Gly Leu Lys Gly Asp Lys Gly
        195                 200                 205

Ile Pro Gly Asp Lys Gly Ala Lys Gly Glu Ser Gly Leu Pro Asp Val
    210                 215                 220

Ala Ser Leu Arg Gln Gln Val Glu Ala Leu Gln Gly Gln Val Gln His
225                 230                 235                 240

Leu Gln Ala Ala Phe Ser Gln Tyr Lys Lys Val Glu Leu Phe Pro Asn
                245                 250                 255

Gly Gln Ser Val Gly Glu Lys Ile Phe Lys Thr Ala Gly Phe Val Lys
            260                 265                 270

Pro Phe Thr Glu Ala Gln Leu Leu Cys Thr Gln Ala Gly Gly Gln Leu
        275                 280                 285

Ala Ser Pro Arg Ser Ala Ala Glu Asn Ala Ala Leu Gln Gln Leu Val
    290                 295                 300

Val Ala Lys Asn Glu Ala Ala Phe Leu Ser Met Thr Asp Ser Lys Thr
305                 310                 315                 320

Glu Gly Lys Phe Thr Tyr Pro Thr Gly Glu Ser Leu Val Tyr Ser Asn
                325                 330                 335

Trp Ala Pro Gly Glu Pro Asn Asp Asp Gly Gly Ser Glu Asp Cys Val
            340                 345                 350

Glu Ile Phe Thr Asn Gly Lys Trp Asn Asp Arg Ala Cys Gly Glu Lys
        355                 360                 365
```

```
Arg Leu Val Val Cys Glu Phe
    370                 375


<210>  95
<211>  197
<212>  PRT
<213>  Homo sapiens

<400>  95

Met Asp Val Gly Ser Lys Glu Val Leu Met Glu Ser Pro Pro Asp Tyr
1               5                   10                  15


Ser Ala Ala Pro Arg Gly Arg Phe Gly Ile Pro Cys Cys Pro Val His
            20                  25                  30


Leu Lys Arg Leu Leu Ile Val Val Val Val Val Leu Ile Val Val
        35                  40                  45


Val Ile Val Gly Ala Leu Leu Met Gly Leu His Met Ser Gln Lys His
    50                  55                  60


Thr Glu Met Val Leu Glu Met Ser Ile Gly Ala Pro Glu Ala Gln Gln
65                  70                  75                  80


Arg Leu Ala Leu Ser Glu His Leu Val Thr Thr Ala Thr Phe Ser Ile
                85                  90                  95


Gly Ser Thr Gly Leu Val Val Tyr Asp Tyr Gln Gln Leu Leu Ile Ala
            100                 105                 110


Tyr Lys Pro Ala Pro Gly Thr Cys Cys Tyr Ile Met Lys Ile Ala Pro
        115                 120                 125


Glu Ser Ile Pro Ser Leu Glu Ala Leu Asn Arg Lys Val His Asn Phe
    130                 135                 140


Gln Met Glu Cys Ser Leu Gln Ala Lys Pro Ala Val Pro Thr Ser Lys
145                 150                 155                 160


Leu Gly Gln Ala Glu Gly Arg Asp Ala Gly Ser Ala Pro Ser Gly Gly
                165                 170                 175


Asp Pro Ala Phe Leu Gly Met Ala Val Asn Thr Leu Cys Gly Glu Val
            180                 185                 190
```

```
Pro Leu Tyr Tyr Ile
        195
```

<210> 96
<211> 248
<212> PRT
<213> Canis familiaris

<400> 96

```
Met Trp Leu Arg Cys Leu Ala Leu Ala Leu Thr Leu Leu Met Val Ser
1               5                   10                  15

Gly Ile Glu Asn Asn Thr Lys Asp Val Cys Val Gly Asn Pro Gly Ile
            20                  25                  30

Pro Gly Thr Pro Gly Ser His Gly Leu Pro Gly Arg Asp Gly Arg Asp
        35                  40                  45

Gly Val Lys Gly Asp Pro Gly Pro Pro Gly Pro Leu Gly Pro Pro Gly
    50                  55                  60

Gly Met Pro Gly His Pro Gly Pro Asn Gly Met Thr Gly Ala Pro Gly
65                  70                  75                  80

Val Ala Gly Glu Arg Gly Glu Lys Gly Glu Pro Gly Glu Arg Gly Pro
                85                  90                  95

Pro Gly Leu Pro Ala Ser Leu Asp Glu Glu Leu Gln Thr Thr Leu His
            100                 105                 110

Asp Leu Arg His Gln Ile Leu Gln Thr Met Gly Val Leu Ser Leu His
        115                 120                 125

Glu Ser Leu Leu Val Val Gly Arg Lys Val Phe Ser Ser Gly Ala Gln
    130                 135                 140

Ser Ile Asn Phe Asn Asp Ile Gln Glu Leu Cys Ala Gly Ala Gly Gly
145                 150                 155                 160

Gln Ile Ala Ala Pro Met Ser Pro Glu Glu Asn Glu Ala Val Ala Ser
                165                 170                 175

Ile Val Lys Lys Tyr Asn Thr Tyr Ala Tyr Leu Gly Leu Val Glu Ser
            180                 185                 190
```

```
Pro Asp Ser Gly Asp Phe Gln Tyr Met Asp Gly Ala Pro Val Asn Tyr
        195                 200                 205

Thr Asn Trp Tyr Pro Gly Glu Pro Arg Gly Arg Gly Lys Glu Gln Cys
    210                 215                 220

Val Glu Met Tyr Thr Asp Gly Gln Trp Asn Asn Lys Asn Cys Leu Gln
225                 230                 235                 240

Tyr Arg Leu Ala Ile Cys Glu Phe
                245
```

<210> 97
<211> 248
<212> PRT
<213> Homo sapiens

<400> 97

```
Met Trp Leu Cys Pro Leu Ala Leu Asn Leu Ile Leu Met Ala Ala Ser
1               5                   10                  15

Gly Ala Val Cys Glu Val Lys Asp Val Cys Val Gly Ser Pro Gly Ile
            20                  25                  30

Pro Gly Thr Pro Gly Ser His Gly Leu Pro Gly Arg His Gly Arg Asp
        35                  40                  45

Gly Leu Lys Gly Asp Leu Gly Pro Pro Gly Pro Met Gly Pro Pro Gly
    50                  55                  60

Glu Met Pro Cys Pro Pro Gly Asn Asp Gly Leu Pro Gly Ala Pro Gly
65                  70                  75                  80

Ile Pro Gly Glu Cys Gly Glu Lys Gly Glu Pro Gly Glu Arg Gly Pro
                85                  90                  95

Pro Gly Leu Pro Ala His Leu Asp Glu Glu Leu Gln Ala Thr Leu His
            100                 105                 110

Asp Phe Arg His Gln Ile Leu Gln Thr Arg Gly Ala Leu Ser Leu Gln
        115                 120                 125

Gly Ser Ile Met Thr Val Gly Glu Lys Val Phe Ser Ser Asn Gly Gln
```

```
    130                 135                 140

Ser Ile Thr Phe Asp Ala Ile Gln Glu Ala Cys Ala Arg Ala Gly Gly
145                 150                 155                 160

Arg Ile Ala Val Pro Arg Asn Pro Glu Glu Asn Glu Ala Ile Ala Ser
                165                 170                 175

Phe Val Lys Lys Tyr Asn Thr Tyr Ala Tyr Val Gly Leu Thr Glu Gly
            180                 185                 190

Pro Ser Pro Gly Asp Phe Arg Tyr Ser Asp Gly Thr Pro Val Asn Tyr
        195                 200                 205

Thr Asn Trp Tyr Arg Gly Glu Pro Ala Gly Arg Gly Lys Glu Gln Cys
    210                 215                 220

Val Glu Met Tyr Thr Asp Gly Gln Trp Asn Asp Arg Asn Cys Leu Tyr
225                 230                 235                 240

Ser Arg Leu Thr Ile Cys Glu Phe
                245
```

<210> 98
<211> 301
<212> PRT
<213> Bos taurus

<400> 98

```
Glu Glu Met Asp Val Tyr Ser Glu Lys Thr Leu Thr Asp Pro Cys Thr
1               5                   10                  15

Leu Val Val Cys Ala Pro Pro Ala Asp Ser Leu Arg Gly His Asp Gly
            20                  25                  30

Arg Asp Gly Lys Glu Gly Pro Gln Gly Glu Lys Gly Asp Pro Gly Pro
        35                  40                  45

Pro Gly Met Pro Gly Pro Ala Gly Arg Glu Gly Pro Ser Gly Arg Gln
    50                  55                  60

Gly Ser Met Gly Pro Pro Gly Thr Pro Gly Pro Lys Gly Glu Pro Gly
65                  70                  75                  80
```

```
Pro Glu Gly Gly Val Gly Ala Pro Gly Met Pro Gly Ser Pro Gly Pro
                85                  90                  95

Ala Gly Leu Lys Gly Glu Arg Gly Ala Pro Gly Pro Gly Gly Ala Ile
            100                 105                 110

Gly Pro Gln Gly Pro Ser Gly Ala Met Gly Pro Pro Gly Leu Lys Gly
        115                 120                 125

Asp Arg Gly Asp Pro Gly Glu Lys Gly Ala Arg Gly Glu Thr Ser Val
    130                 135                 140

Leu Glu Val Asp Thr Leu Arg Gln Arg Met Arg Asn Leu Glu Gly Glu
145                 150                 155                 160

Val Gln Arg Leu Gln Asn Ile Val Thr Gln Tyr Arg Lys Ala Val Leu
                165                 170                 175

Phe Pro Asp Gly Gln Ala Val Gly Glu Lys Ile Phe Lys Thr Ala Gly
            180                 185                 190

Ala Val Lys Ser Tyr Ser Asp Ala Glu Gln Leu Cys Arg Glu Ala Lys
        195                 200                 205

Gly Gln Leu Ala Ser Pro Arg Ser Ser Ala Glu Asn Glu Ala Val Thr
    210                 215                 220

Gln Leu Val Arg Ala Lys Asn Lys His Ala Tyr Leu Ser Met Asn Asp
225                 230                 235                 240

Ile Ser Lys Glu Gly Lys Phe Thr Tyr Pro Thr Gly Gly Ser Leu Asp
                245                 250                 255

Tyr Ser Asn Trp Ala Pro Gly Glu Pro Asn Asn Arg Ala Lys Asp Glu
            260                 265                 270

Gly Pro Glu Asn Cys Leu Glu Ile Tyr Ser Asp Gly Asn Trp Asn Asp
        275                 280                 285

Ile Glu Cys Arg Glu Glu Arg Leu Val Ile Cys Glu Phe
    290                 295                 300
```

<210> 99
<211> 369

<212> PRT
<213> Bos taurus

<400> 99

```
Met Leu Leu Leu Pro Leu Ser Val Leu Leu Leu Leu Thr Gln Pro Trp
1               5                  10                  15

Arg Ser Leu Gly Ala Glu Met Lys Ile Tyr Ser Gln Lys Thr Met Ala
            20                  25                  30

Asn Ala Cys Thr Leu Val Met Cys Ser Pro Pro Glu Asp Gly Leu Pro
        35                  40                  45

Gly Arg Asp Gly Arg Asp Gly Arg Glu Gly Pro Arg Gly Glu Lys Gly
    50                  55                  60

Asp Pro Gly Ser Pro Gly Pro Ala Gly Arg Ala Gly Met Pro Gly Pro
65                  70                  75                  80

Ala Gly Pro Ile Gly Leu Lys Gly Asp Asn Gly Ser Ala Gly Glu Pro
                85                  90                  95

Gly Pro Lys Gly Asp Thr Gly Pro Pro Gly Pro Pro Gly Met Pro Gly
            100                 105                 110

Pro Ala Gly Arg Glu Gly Pro Ser Gly Lys Gln Gly Ser Met Gly Pro
        115                 120                 125

Pro Gly Thr Pro Gly Pro Lys Gly Asp Thr Gly Pro Lys Gly Gly Val
    130                 135                 140

Gly Ala Pro Gly Ile Gln Gly Ser Pro Gly Pro Ala Gly Leu Lys Gly
145                 150                 155                 160

Glu Arg Gly Ala Pro Gly Asp Pro Gly Ala Pro Gly Arg Ala Gly Ala
                165                 170                 175

Pro Gly Pro Arg Gly Ala Ile Gly Pro Gln Gly Pro Ser Gly Ala Arg
            180                 185                 190

Gly Pro Pro Gly Leu Lys Gly Asp Arg Gly Thr Pro Gly Glu Arg Gly
        195                 200                 205

Ala Lys Gly Glu Ser Gly Leu Ala Glu Val Asn Ala Leu Arg Gln Arg
```

```
    210                 215                 220

Val Gly Ile Leu Glu Gly Gln Leu Gln Arg Leu Gln Asn Ala Phe Ser
225                 230                 235                 240

Gln Tyr Lys Lys Ala Met Leu Phe Pro Asn Gly Arg Ser Val Gly Glu
                245                 250                 255

Lys Ile Phe Lys Thr Val Gly Ser Glu Lys Thr Phe Gln Asp Ala Gln
            260                 265                 270

Gln Ile Cys Thr Gln Ala Gly Gly Gln Leu Pro Ser Pro Arg Ser Gly
        275                 280                 285

Ala Glu Asn Glu Ala Leu Thr Gln Leu Ala Thr Ala Gln Asn Lys Ala
    290                 295                 300

Ala Phe Leu Ser Met Ser Asp Thr Arg Lys Glu Gly Thr Phe Ile Tyr
305                 310                 315                 320

Pro Thr Gly Glu Pro Leu Val Tyr Ser Asn Trp Ala Pro Gln Glu Pro
                325                 330                 335

Asn Asn Asp Gly Gly Ser Glu Asn Cys Val Glu Ile Phe Pro Asn Gly
            340                 345                 350

Lys Trp Asn Asp Lys Val Cys Gly Glu Gln Arg Leu Val Ile Cys Glu
        355                 360                 365

Phe
```

<210> 100
<211> 116
<212> PRT
<213> Sus scrofa

<400> 100

```
Ala Val Gly Glu Lys Val Phe Ser Thr Asn Gly Gln Ser Val Ala Phe
1               5                   10                  15

Asp Val Ile Arg Glu Leu Cys Ala Arg Ala Gly Gly Arg Ile Ala Ala
            20                  25                  30
```

```
Pro Arg Ser Pro Glu Glu Asn Glu Ala Ile Ala Ser Ile Val Lys Lys
        35                  40                  45

His Asn Thr Tyr Ala Tyr Leu Gly Leu Val Glu Gly Pro Thr Ala Gly
    50                  55                  60

Asp Phe Phe Tyr Leu Asp Gly Thr Pro Val Asn Tyr Thr Asn Trp Tyr
65                  70                  75                  80

Pro Gly Glu Pro Arg Gly Arg Gly Lys Glu Lys Cys Val Glu Met Tyr
                85                  90                  95

Thr Asp Gly Gln Trp Asn Asp Arg Asn Cys Gln Gln Tyr Arg Leu Ala
            100                 105                 110

Ile Cys Glu Phe
        115
```

<210> 101
<211> 378
<212> PRT
<213> Sus scrofa

<400> 101

```
Met Leu Leu Leu Pro Leu Ser Val Leu Ile Leu Leu Thr Gln Pro Pro
1               5                   10                  15

Arg Ser Leu Gly Ala Glu Met Lys Thr Tyr Ser Gln Arg Ala Val Ala
            20                  25                  30

Asn Ala Cys Ala Leu Val Met Cys Ser Pro Met Glu Asn Gly Leu Pro
        35                  40                  45

Gly Arg Asp Gly Arg Asp Gly Arg Glu Gly Pro Arg Gly Glu Lys Gly
    50                  55                  60

Asp Pro Gly Leu Pro Gly Ala Val Gly Arg Ala Gly Met Pro Gly Leu
65                  70                  75                  80

Ala Gly Pro Val Gly Pro Lys Gly Asp Asn Gly Ser Thr Gly Glu Pro
                85                  90                  95

Gly Ala Lys Gly Asp Ile Gly Pro Cys Gly Pro Pro Gly Pro Pro Gly
            100                 105                 110
```

Ile Pro Gly Pro Ala Gly Lys Glu Gly Pro Ser Gly Gln Gln Gly Asn
115 120 125

Ile Gly Pro Pro Gly Thr Pro Gly Pro Lys Gly Glu Thr Gly Pro Lys
130 135 140

Gly Glu Val Gly Ala Leu Gly Met Gln Gly Ser Thr Gly Ala Arg Gly
145 150 155 160

Pro Ala Gly Leu Lys Gly Glu Arg Gly Ala Pro Gly Glu Arg Gly Ala
165 170 175

Pro Gly Ser Ala Gly Ala Ala Gly Pro Ala Gly Ala Thr Gly Pro Gln
180 185 190

Gly Pro Ser Gly Ala Arg Gly Pro Pro Gly Leu Lys Gly Asp Arg Gly
195 200 205

Pro Pro Gly Glu Arg Gly Ala Lys Gly Glu Ser Gly Leu Pro Gly Ile
210 215 220

Thr Ala Leu Arg Gln Gln Val Glu Thr Leu Gln Gly Gln Val Gln Arg
225 230 235 240

Leu Gln Lys Ala Phe Ser Gln Tyr Lys Lys Val Glu Leu Phe Pro Asn
245 250 255

Gly Arg Gly Val Gly Glu Lys Ile Phe Lys Thr Gly Gly Phe Glu Lys
260 265 270

Thr Phe Gln Asp Ala Gln Gln Val Cys Thr Gln Ala Gly Gly Gln Met
275 280 285

Ala Ser Pro Arg Ser Glu Thr Glu Asn Glu Ala Leu Ser Gln Leu Val
290 295 300

Thr Ala Gln Asn Lys Ala Ala Phe Leu Ser Met Thr Asp Ile Lys Thr
305 310 315 320

Glu Gly Asn Phe Thr Tyr Pro Thr Gly Glu Pro Leu Val Tyr Ala Asn
325 330 335

Trp Ala Pro Gly Glu Pro Asn Asn Asn Gly Gly Ser Ser Gly Ala Glu

```
            340                 345                 350

Asn Cys Val Glu Ile Phe Pro Asn Gly Lys Trp Asn Asp Lys Ala Cys
        355                 360                 365

Gly Glu Leu Arg Leu Val Ile Cys Glu Phe
    370                 375
```

<210> 102
<211> 34
<212> PRT
<213> Bos taurus

<400> 102

```
Leu Ile Pro Cys Cys Pro Val Asn Ile Lys Arg Leu Leu Ile Val Val
1               5                   10                  15

Val Val Val Val Leu Leu Val Val Val Ile Val Gly Ala Leu Leu Met
            20                  25                  30

Gly Leu
```

<210> 103
<211> 369
<212> PRT
<213> Bos taurus

<400> 103

```
Met Leu Leu Leu Pro Leu Ser Val Leu Leu Leu Leu Thr Gln Pro Trp
1               5                   10                  15

Arg Ser Leu Gly Ala Glu Met Lys Ile Tyr Ser Gln Lys Thr Met Ala
            20                  25                  30

Asn Ala Cys Thr Leu Val Met Cys Ser Pro Pro Glu Asp Gly Leu Pro
        35                  40                  45

Gly Arg Asp Gly Arg Asp Gly Arg Glu Gly Pro Arg Gly Glu Lys Gly
    50                  55                  60

Asp Pro Gly Ser Pro Gly Pro Ala Gly Arg Ala Gly Met Pro Gly Pro
65                  70                  75                  80

Ala Gly Pro Ile Gly Leu Lys Gly Asp Asn Gly Ser Ala Gly Glu Pro
```

```
                85                  90                  95

Gly Pro Lys Gly Asp Thr Gly Pro Pro Gly Pro Pro Gly Met Pro Gly
            100                 105                 110

Pro Ala Gly Arg Glu Gly Pro Ser Gly Lys Gln Gly Ser Met Gly Pro
        115                 120                 125

Pro Gly Thr Pro Gly Pro Lys Gly Asp Thr Gly Pro Lys Gly Gly Val
    130                 135                 140

Gly Ala Pro Gly Ile Gln Gly Ser Pro Gly Pro Ala Gly Leu Lys Gly
145                 150                 155                 160

Glu Arg Gly Ala Pro Gly Glu Pro Gly Ala Pro Gly Arg Ala Gly Ala
                165                 170                 175

Pro Gly Pro Ala Gly Ala Ile Gly Pro Gln Gly Pro Ser Gly Ala Arg
            180                 185                 190

Gly Pro Pro Gly Leu Lys Gly Asp Arg Gly Thr Pro Gly Glu Arg Gly
        195                 200                 205

Ala Lys Gly Glu Ser Gly Leu Ala Glu Val Asn Ala Leu Arg Gln Arg
    210                 215                 220

Val Gly Ile Leu Glu Gly Gln Leu Gln Arg Leu Gln Asn Ala Phe Ser
225                 230                 235                 240

Gln Tyr Lys Lys Ala Met Leu Phe Pro Asn Gly Arg Ser Val Gly Glu
                245                 250                 255

Lys Ile Phe Lys Thr Val Gly Ser Glu Lys Thr Phe Gln Asp Ala Gln
            260                 265                 270

Gln Ile Cys Thr Gln Ala Gly Gly Gln Leu Pro Ser Pro Arg Ser Gly
        275                 280                 285

Ala Glu Asn Glu Ala Leu Thr Gln Leu Ala Thr Ala Gln Asn Lys Ala
    290                 295                 300

Ala Phe Leu Ser Met Ser Asp Thr Arg Lys Glu Gly Thr Phe Ile Tyr
305                 310                 315                 320
```

```
Pro Thr Gly Glu Pro Leu Val Tyr Ser Asn Trp Ala Pro Gln Glu Pro
                325                 330                 335

Asn Asn Asp Gly Gly Ser Glu Asn Cys Val Glu Ile Phe Pro Asn Gly
            340                 345                 350

Lys Trp Asn Asp Lys Val Cys Gly Glu Gln Arg Leu Val Ile Cys Glu
        355                 360                 365

Phe
```

<210> 104
<211> 301
<212> PRT
<213> Bos taurus

<400> 104

```
Glu Glu Met Asp Val Tyr Ser Glu Lys Thr Leu Thr Asp Pro Cys Thr
1               5                   10                  15

Leu Val Val Cys Ala Pro Pro Ala Asp Ser Leu Arg Gly His Asp Gly
            20                  25                  30

Arg Asp Gly Lys Glu Gly Pro Gln Gly Glu Lys Gly Asp Pro Gly Pro
        35                  40                  45

Pro Gly Met Pro Gly Pro Ala Gly Arg Glu Gly Pro Ser Gly Arg Gln
    50                  55                  60

Gly Ser Met Gly Pro Pro Gly Thr Pro Gly Pro Lys Gly Glu Pro Gly
65                  70                  75                  80

Pro Glu Gly Gly Val Gly Ala Pro Gly Met Pro Gly Ser Pro Gly Pro
                85                  90                  95

Ala Gly Leu Lys Gly Glu Arg Gly Ala Pro Gly Pro Gly Gly Ala Ile
            100                 105                 110

Gly Pro Gln Gly Pro Ser Gly Ala Met Gly Pro Pro Gly Leu Lys Gly
        115                 120                 125

Asp Arg Gly Asp Pro Gly Glu Lys Gly Ala Arg Gly Glu Thr Ser Val
    130                 135                 140
```

```
Leu Glu Val Asp Thr Leu Arg Gln Arg Met Arg Asn Leu Glu Gly Glu
145                 150                 155                 160

Val Gln Arg Leu Gln Asn Ile Val Thr Gln Tyr Arg Lys Ala Val Leu
                165                 170                 175

Phe Pro Asp Gly Gln Ala Val Gly Glu Lys Ile Phe Lys Thr Ala Gly
            180                 185                 190

Ala Val Lys Ser Tyr Ser Asp Ala Glu Gln Leu Cys Arg Glu Ala Lys
        195                 200                 205

Gly Gln Leu Ala Ser Pro Arg Ser Ser Ala Glu Asn Glu Ala Val Thr
    210                 215                 220

Gln Leu Val Arg Ala Lys Asn Lys His Ala Tyr Leu Ser Met Asn Asp
225                 230                 235                 240

Ile Ser Lys Glu Gly Lys Phe Thr Tyr Pro Thr Gly Gly Ser Leu Asp
                245                 250                 255

Tyr Ser Asn Trp Ala Pro Gly Glu Pro Gly Asn Arg Ala Lys Asp Glu
            260                 265                 270

Gly Pro Glu Asn Cys Leu Glu Ile Tyr Ser Asp Gly Asn Trp Asn Asp
        275                 280                 285

Ile Glu Cys Arg Glu Glu Arg Leu Val Ile Cys Glu Phe
    290                 295                 300
```

<210> 105
<211> 2412
<212> PRT
<213> Homo sapiens

<400> 105

```
Met Gly Ile Ser Thr Val Ile Leu Glu Met Cys Leu Leu Trp Gly Gln
1               5                   10                  15

Val Leu Ser Thr Gly Gly Trp Ile Pro Arg Thr Thr Asp Tyr Ala Ser
            20                  25                  30

Leu Ile Pro Ser Glu Val Pro Leu Asp Thr Thr Val Ala Glu Gly Ser
```

```
        35                  40                  45

Pro Phe Pro Ser Glu Leu Thr Leu Glu Ser Thr Val Ala Glu Gly Ser
    50                  55                  60

Pro Ile Ser Leu Glu Ser Thr Leu Glu Thr Thr Val Ala Glu Gly Ser
65                  70                  75                  80

Leu Ile Pro Ser Glu Ser Thr Leu Glu Ser Thr Val Ala Glu Gly Ser
                85                  90                  95

Asp Ser Gly Leu Ala Leu Arg Leu Val Asn Gly Asp Gly Arg Cys Gln
            100                 105                 110

Gly Arg Val Glu Ile Leu Tyr Arg Gly Ser Trp Gly Ala Val Cys Asp
        115                 120                 125

Asp Ser Trp Asp Thr Asn Asp Ala Asn Val Val Cys Arg Gln Leu Gly
    130                 135                 140

Cys Gly Trp Ala Met Ser Ala Pro Gly Asn Ala Trp Phe Gly Gln Gly
145                 150                 155                 160

Ser Gly Pro Ile Ala Leu Asp Asp Val Arg Cys Ser Gly His Glu Ser
                165                 170                 175

Tyr Leu Trp Ser Cys Pro His Asn Gly Trp Leu Ser His Asn Cys Gly
            180                 185                 190

His Gly Glu Asp Ala Gly Val Ile Cys Ser Ala Ala Gln Pro Gln Ser
        195                 200                 205

Thr Leu Arg Pro Glu Ser Trp Pro Val Arg Ile Ser Pro Pro Val Pro
    210                 215                 220

Thr Glu Gly Ser Glu Ser Ser Leu Ala Leu Arg Leu Val Asn Gly Gly
225                 230                 235                 240

Asp Arg Cys Arg Gly Arg Val Glu Val Leu Tyr Arg Gly Ser Trp Gly
                245                 250                 255

Thr Val Cys Asp Asp Tyr Trp Asp Thr Asn Asp Ala Asn Val Val Cys
            260                 265                 270
```

```
Arg Gln Leu Gly Cys Gly Trp Ala Met Ser Ala Pro Gly Asn Ala Gln
        275                 280                 285

Phe Gly Gln Gly Ser Gly Pro Ile Val Leu Asp Asp Val Arg Cys Ser
    290                 295                 300

Gly His Glu Ser Tyr Leu Trp Ser Cys Pro His Asn Gly Trp Leu Thr
305                 310                 315                 320

His Asn Cys Gly His Ser Glu Asp Ala Gly Val Ile Cys Ser Ala Pro
                325                 330                 335

Gln Ser Arg Pro Thr Pro Ser Pro Asp Thr Trp Pro Thr Ser His Ala
            340                 345                 350

Ser Thr Ala Gly Pro Glu Ser Ser Leu Ala Leu Arg Leu Val Asn Gly
        355                 360                 365

Gly Asp Arg Cys Gln Gly Arg Val Glu Val Leu Tyr Arg Gly Ser Trp
    370                 375                 380

Gly Thr Val Cys Asp Asp Ser Trp Asp Thr Ser Asp Ala Asn Val Val
385                 390                 395                 400

Cys Arg Gln Leu Gly Cys Gly Trp Ala Thr Ser Ala Pro Gly Asn Ala
                405                 410                 415

Arg Phe Gly Gln Gly Ser Gly Pro Ile Val Leu Asp Asp Val Arg Cys
            420                 425                 430

Ser Gly Tyr Glu Ser Tyr Leu Trp Ser Cys Pro His Asn Gly Trp Leu
        435                 440                 445

Ser His Asn Cys Gln His Ser Glu Asp Ala Gly Val Ile Cys Ser Ala
    450                 455                 460

Ala His Ser Trp Ser Thr Pro Ser Pro Asp Thr Leu Pro Thr Ile Thr
465                 470                 475                 480

Leu Pro Ala Ser Thr Val Gly Ser Glu Ser Ser Leu Ala Leu Arg Leu
                485                 490                 495

Val Asn Gly Gly Asp Arg Cys Gln Gly Arg Val Glu Val Leu Tyr Arg
```

```
            500                 505                 510

Gly Ser Trp Gly Thr Val Cys Asp Asp Ser Trp Asp Thr Asn Asp Ala
        515                 520                 525

Asn Val Val Cys Arg Gln Leu Gly Cys Gly Trp Ala Met Leu Ala Pro
    530                 535                 540

Gly Asn Ala Arg Phe Gly Gln Gly Ser Gly Pro Ile Val Leu Asp Asp
545                 550                 555                 560

Val Arg Cys Ser Gly Asn Glu Ser Tyr Leu Trp Ser Cys Pro His Asn
                565                 570                 575

Gly Trp Leu Ser His Asn Cys Gly His Ser Glu Asp Ala Gly Val Ile
            580                 585                 590

Cys Ser Gly Pro Glu Ser Ser Leu Ala Leu Arg Leu Val Asn Gly Gly
        595                 600                 605

Asp Arg Cys Gln Gly Arg Val Glu Val Leu Tyr Arg Gly Ser Trp Gly
    610                 615                 620

Thr Val Cys Asp Asp Ser Trp Asp Thr Asn Asp Ala Asn Val Val Cys
625                 630                 635                 640

Arg Gln Leu Gly Cys Gly Trp Ala Met Ser Ala Pro Gly Asn Ala Arg
                645                 650                 655

Phe Gly Gln Gly Ser Gly Pro Ile Val Leu Asp Asp Val Arg Cys Ser
            660                 665                 670

Gly His Glu Ser Tyr Leu Trp Ser Cys Pro Asn Asn Gly Trp Leu Ser
        675                 680                 685

His Asn Cys Gly His His Glu Asp Ala Gly Val Ile Cys Ser Ala Ala
    690                 695                 700

Gln Ser Arg Ser Thr Pro Arg Pro Asp Thr Leu Ser Thr Ile Thr Leu
705                 710                 715                 720

Pro Pro Ser Thr Val Gly Ser Glu Ser Ser Leu Thr Leu Arg Leu Val
                725                 730                 735
```

```
Asn Gly Ser Asp Arg Cys Gln Gly Arg Val Glu Val Leu Tyr Arg Gly
            740                 745                 750

Ser Trp Gly Thr Val Cys Asp Asp Ser Trp Asp Thr Asn Asp Ala Asn
        755                 760                 765

Val Val Cys Arg Gln Leu Gly Cys Gly Trp Ala Thr Ser Ala Pro Gly
    770                 775                 780

Asn Ala Arg Phe Gly Gln Gly Ser Gly Pro Ile Val Leu Asp Asp Val
785                 790                 795                 800

Arg Cys Ser Gly His Glu Ser Tyr Leu Trp Ser Cys Pro His Asn Gly
                805                 810                 815

Trp Leu Ser His Asn Cys Gly His His Glu Asp Ala Gly Val Ile Cys
            820                 825                 830

Ser Val Ser Gln Ser Arg Pro Thr Pro Ser Pro Asp Thr Trp Pro Thr
        835                 840                 845

Ser His Ala Ser Thr Ala Gly Pro Glu Ser Ser Leu Ala Leu Arg Leu
    850                 855                 860

Val Asn Gly Gly Asp Arg Cys Gln Gly Arg Val Glu Val Leu Tyr Arg
865                 870                 875                 880

Gly Ser Trp Gly Thr Val Cys Asp Asp Ser Trp Asp Thr Ser Asp Ala
                885                 890                 895

Asn Val Val Cys Arg Gln Leu Gly Cys Gly Trp Ala Thr Ser Ala Pro
            900                 905                 910

Gly Asn Ala Arg Phe Gly Gln Gly Ser Gly Pro Ile Val Leu Asp Asp
        915                 920                 925

Val Arg Cys Ser Gly Tyr Glu Ser Tyr Leu Trp Ser Cys Pro His Asn
    930                 935                 940

Gly Trp Leu Ser His Asn Cys Gln His Ser Glu Asp Ala Gly Val Ile
945                 950                 955                 960

Cys Ser Ala Ala His Ser Trp Ser Thr Pro Ser Pro Asp Thr Leu Pro
```

```
                965                 970                 975

Thr Ile Thr Leu Pro Ala Ser Thr Val Gly Ser Glu Ser Ser Leu Ala
            980                 985                 990

Leu Arg Leu Val Asn Gly Gly Asp  Arg Cys Gln Gly Arg  Val Glu Val
        995                 1000                1005

Leu Tyr  Gln Gly Ser Trp Gly  Thr Val Cys Asp Asp  Ser Trp Asp
    1010                1015                1020

Thr Asn  Asp Ala Asn Val Val  Cys Arg Gln Leu Gly  Cys Gly Trp
    1025                1030                1035

Ala Met  Ser Ala Pro Gly Asn  Ala Arg Phe Gly Gln  Gly Ser Gly
    1040                1045                1050

Pro Ile  Val Leu Asp Asp Ala  Arg Cys Ser Gly His  Glu Ser Tyr
    1055                1060                1065

Leu Trp  Ser Cys Pro His Asn  Gly Trp Leu Ser His  Asn Cys Gly
    1070                1075                1080

His Ser  Glu Asp Ala Gly Val  Ile Cys Ser Ala Ser  Gln Ser Arg
    1085                1090                1095

Pro Thr  Pro Ser Pro Asp Thr  Trp Pro Thr Ser His  Ala Ser Thr
    1100                1105                1110

Ala Gly  Ser Glu Ser Ser Leu  Ala Leu Arg Leu Val  Asn Gly Gly
    1115                1120                1125

Asp Arg  Cys Gln Gly Arg Val  Glu Val Leu Tyr Arg  Gly Ser Trp
    1130                1135                1140

Gly Thr  Val Cys Asp Asp Tyr  Trp Asp Thr Asn Asp  Ala Asn Val
    1145                1150                1155

Ala Cys  Arg Gln Leu Gly Cys  Gly Trp Ala Met Ser  Ala Pro Gly
    1160                1165                1170

Asn Ala  Arg Phe Gly Gln Gly  Ser Gly Pro Ile Val  Leu Asp Asp
    1175                1180                1185
```

```
Val Arg  Cys Ser Gly His Glu  Ser Tyr Leu Trp Ser  Cys Pro His
    1190                1195                1200

Asn Gly  Trp Leu Ser His Asn  Cys Gly His His Glu  Asp Ala Gly
    1205                1210                1215

Val Ile  Cys Ser Ala Ser Gln  Ser Gln Pro Thr Pro  Ser Pro Asp
    1220                1225                1230

Thr Trp  Pro Thr Ser His Ala  Ser Thr Ala Gly Ser  Glu Ser Ser
    1235                1240                1245

Leu Ala  Leu Arg Leu Val Asn  Gly Gly Asp Arg Cys  Gln Gly Arg
    1250                1255                1260

Val Glu  Val Leu Tyr Arg Gly  Ser Trp Gly Thr Val  Cys Asp Asp
    1265                1270                1275

Tyr Trp  Asp Thr Asn Asp Ala  Asn Val Val Cys Arg  Gln Leu Gly
    1280                1285                1290

Cys Gly  Trp Ala Thr Ser Ala  Pro Gly Asn Ala Arg  Phe Gly Gln
    1295                1300                1305

Gly Ser  Gly Pro Ile Val Leu  Asp Asp Val Arg Cys  Ser Gly His
    1310                1315                1320

Glu Ser  Tyr Leu Trp Ser Cys  Pro His Asn Gly Trp  Leu Ser His
    1325                1330                1335

Asn Cys  Gly His His Glu Asp  Ala Gly Val Ile Cys  Ser Ala Ser
    1340                1345                1350

Gln Ser  Gln Pro Thr Pro Ser  Pro Asp Thr Trp Pro  Thr Ser His
    1355                1360                1365

Ala Ser  Thr Ala Gly Ser Glu  Ser Ser Leu Ala Leu  Arg Leu Val
    1370                1375                1380

Asn Gly  Gly Asp Arg Cys Gln  Gly Arg Val Glu Val  Leu Tyr Arg
    1385                1390                1395

Gly Ser  Trp Gly Thr Val Cys  Asp Asp Tyr Trp Asp  Thr Asn Asp
```

```
    1400                1405                1410

Ala Asn  Val Val Cys Arg Gln  Leu Gly Cys Gly Trp  Ala Thr Ser
    1415                1420                1425

Ala Pro  Gly Asn Ala Arg Phe  Gly Gln Gly Ser Gly  Pro Ile Val
    1430                1435                1440

Leu Asp  Asp Val Arg Cys Ser  Gly His Glu Ser Tyr  Leu Trp Ser
    1445                1450                1455

Cys Pro  His Asn Gly Trp Leu  Ser His Asn Cys Gly  His His Glu
    1460                1465                1470

Asp Ala  Gly Val Ile Cys Ser  Ala Phe Gln Ser Gln  Pro Thr Pro
    1475                1480                1485

Ser Pro  Asp Thr Trp Pro Thr  Ser Arg Ala Ser Thr  Ala Gly Ser
    1490                1495                1500

Glu Ser  Thr Leu Ala Leu Arg  Leu Val Asn Gly Gly  Asp Arg Cys
    1505                1510                1515

Arg Gly  Arg Val Glu Val Leu  Tyr Gln Gly Ser Trp  Gly Thr Val
    1520                1525                1530

Cys Asp  Asp Tyr Trp Asp Thr  Asn Asp Ala Asn Val  Val Cys Arg
    1535                1540                1545

Gln Leu  Gly Cys Gly Trp Ala  Met Ser Ala Pro Gly  Asn Ala Gln
    1550                1555                1560

Phe Gly  Gln Gly Ser Gly Pro  Ile Val Leu Asp Asp  Val Arg Cys
    1565                1570                1575

Ser Gly  His Glu Pro Tyr Leu  Trp Ser Cys Pro His  Asn Gly Trp
    1580                1585                1590

Leu Ser  His Asn Cys Gly His  His Glu Asp Ala Gly  Val Ile Cys
    1595                1600                1605

Ser Ala  Ala Gln Ser Gln Ser  Thr Pro Arg Pro Asp  Thr Trp Leu
    1610                1615                1620
```

```
Thr Thr  Asn Leu Pro Ala Leu  Thr Val Gly Ser Glu  Ser Ser Leu
    1625                 1630                 1635

Ala Leu  Arg Leu Val Asn Gly  Gly Asp Arg Cys Arg  Gly Arg Val
    1640                 1645                 1650

Glu Val  Leu Tyr Arg Gly Ser  Trp Gly Thr Val Cys  Asp Asp Ser
    1655                 1660                 1665

Trp Asp  Thr Asn Asp Ala Asn  Val Val Cys Arg Gln  Leu Gly Cys
    1670                 1675                 1680

Gly Trp  Ala Met Ser Ala Pro  Gly Asn Ala Arg Phe  Gly Gln Gly
    1685                 1690                 1695

Ser Gly  Pro Ile Val Leu Gly  Asp Val Arg Cys Ser  Gly Asn Glu
    1700                 1705                 1710

Ser Tyr  Leu Trp Ser Cys Pro  His Lys Gly Trp Leu  Thr His Asn
    1715                 1720                 1725

Cys Gly  His His Glu Asp Ala  Gly Val Ile Cys Ser  Ala Thr Gln
    1730                 1735                 1740

Ile Asn  Ser Thr Thr Thr Asp  Trp Trp His Pro Thr  Thr Thr Thr
    1745                 1750                 1755

Thr Ala  Arg Pro Ser Ser Asn  Cys Gly Gly Phe Leu  Phe Tyr Ala
    1760                 1765                 1770

Ser Gly  Thr Phe Ser Ser Pro  Ser Tyr Pro Ala Tyr  Tyr Pro Asn
    1775                 1780                 1785

Asn Ala  Lys Cys Val Trp Glu  Ile Glu Val Asn Ser  Gly Tyr Arg
    1790                 1795                 1800

Ile Asn  Leu Gly Phe Ser Asn  Leu Lys Leu Glu Ala  His His Asn
    1805                 1810                 1815

Cys Ser  Phe Asp Tyr Val Glu  Ile Phe Asp Gly Ser  Leu Asn Ser
    1820                 1825                 1830

Ser Leu  Leu Leu Gly Lys Ile  Cys Asn Asp Thr Arg  Gln Ile Phe
```

```
    1835                1840                1845

Thr Ser  Ser Tyr Asn Arg Met  Thr Ile His Phe Arg  Ser Asp Ile
    1850                1855                1860

Ser Phe  Gln Asn Thr Gly Phe  Leu Ala Trp Tyr Asn  Ser Phe Pro
    1865                1870                1875

Ser Asp  Ala Thr Leu Arg Leu  Val Asn Leu Asn Ser  Ser Tyr Gly
    1880                1885                1890

Leu Cys  Ala Gly Arg Val Glu  Ile Tyr His Gly Gly  Thr Trp Gly
    1895                1900                1905

Ala Val  Cys Asp Asp Ser Trp  Thr Ile Gln Glu Ala  Glu Val Val
    1910                1915                1920

Cys Arg  Gln Leu Gly Cys Gly  Arg Ala Val Ser Ala  Leu Gly Asn
    1925                1930                1935

Ala Tyr  Phe Gly Ser Gly Ser  Gly Pro Ile Thr Leu  Asp Asp Val
    1940                1945                1950

Glu Cys  Ser Gly Thr Glu Ser  Thr Leu Trp Gln Cys  Arg Asn Arg
    1955                1960                1965

Gly Trp  Phe Ser His Asn Cys  Asn His Arg Glu Asp  Ala Gly Val
    1970                1975                1980

Ile Cys  Ser Gly Asn His Leu  Ser Thr Pro Ala Pro  Phe Leu Asn
    1985                1990                1995

Ile Thr  Arg Pro Asn Asn Tyr  Ser Cys Gly Gly Phe  Leu Ser Gln
    2000                2005                2010

Pro Ser  Gly Asp Phe Ser Ser  Pro Phe Tyr Pro Gly  Asn Tyr Pro
    2015                2020                2025

Asn Asn  Ala Lys Cys Val Trp  Asp Ile Glu Val Gln  Asn Asn Tyr
    2030                2035                2040

Arg Val  Thr Val Ile Phe Arg  Asp Val Gln Leu Glu  Gly Gly Cys
    2045                2050                2055
```

```
Asn Tyr  Asp Tyr Ile Glu Val  Phe Asp Gly Pro Tyr  Arg Ser Ser
    2060                2065                2070

Pro Leu  Ile Ala Arg Val Cys  Asp Gly Ala Arg Gly  Ser Phe Thr
    2075                2080                2085

Ser Ser  Ser Asn Phe Met Ser  Ile Arg Phe Ile Ser  Asp His Ser
    2090                2095                2100

Ile Thr  Arg Arg Gly Phe Arg  Ala Glu Tyr Tyr Ser  Ser Pro Ser
    2105                2110                2115

Asn Asp  Ser Thr Asn Leu Leu  Cys Leu Pro Asn His  Met Gln Ala
    2120                2125                2130

Ser Val  Ser Arg Ser Tyr Leu  Gln Ser Leu Gly Phe  Ser Ala Ser
    2135                2140                2145

Asp Leu  Val Ile Ser Thr Trp  Asn Gly Tyr Tyr Glu  Cys Arg Pro
    2150                2155                2160

Gln Ile  Thr Pro Asn Leu Val  Ile Phe Thr Ile Pro  Tyr Ser Gly
    2165                2170                2175

Cys Gly  Thr Phe Lys Gln Ala  Asp Asn Asp Thr Ile  Asp Tyr Ser
    2180                2185                2190

Asn Leu  Leu Thr Ala Ala Val  Ser Gly Gly Ile Ile  Lys Arg Arg
    2195                2200                2205

Thr Asp  Leu Arg Ile His Val  Ser Cys Arg Met Leu  Gln Asn Thr
    2210                2215                2220

Trp Val  Asp Thr Met Tyr Ile  Ala Asn Asp Thr Ile  His Val Ala
    2225                2230                2235

Asn Asn  Thr Ile Gln Val Glu  Glu Val Gln Tyr Gly  Asn Phe Asp
    2240                2245                2250

Val Asn  Ile Ser Phe Tyr Thr  Ser Ser Ser Phe Leu  Tyr Pro Val
    2255                2260                2265

Thr Ser  Arg Pro Tyr Tyr Val  Asp Leu Asn Gln Asp  Leu Tyr Val
```

```
    2270                2275                2280

Gln Ala  Glu Ile Leu His Ser  Asp Ala Val Leu Thr  Leu Phe Val
    2285                2290                2295

Asp Thr  Cys Val Ala Ser Pro  Tyr Ser Asn Asp Phe  Thr Ser Leu
    2300                2305                2310

Thr Tyr  Asp Leu Ile Arg Ser  Gly Cys Val Arg Asp  Asp Thr Tyr
    2315                2320                2325

Gly Pro  Tyr Ser Ser Pro Ser  Leu Arg Ile Ala Arg  Phe Arg Phe
    2330                2335                2340

Arg Ala  Phe His Phe Leu Asn  Arg Phe Pro Ser Val  Tyr Leu Arg
    2345                2350                2355

Cys Lys  Met Val Val Cys Arg  Ala Tyr Asp Pro Ser  Ser Arg Cys
    2360                2365                2370

Tyr Arg  Gly Cys Val Leu Arg  Ser Lys Arg Asp Val  Gly Ser Tyr
    2375                2380                2385

Gln Glu  Lys Val Asp Val Val  Leu Gly Pro Ile Gln  Leu Gln Thr
    2390                2395                2400

Pro Pro  Arg Arg Glu Glu Glu  Pro Arg
    2405                2410
```

<210> 106
<211> 2413
<212> PRT
<213> Homo sapiens

<400> 106

```
Met Gly Ile Ser Thr Val Ile Leu Glu Met Cys Leu Leu Trp Gly Gln
1               5                  10                  15

Val Leu Ser Thr Gly Gly Trp Ile Pro Arg Thr Thr Asp Tyr Ala Ser
            20                  25                  30

Leu Ile Pro Ser Glu Val Pro Leu Asp Gln Thr Val Ala Glu Gly Ser
        35                  40                  45
```

```
Pro Phe Pro Ser Glu Ser Thr Leu Glu Ser Thr Ala Ala Glu Gly Ser
    50                  55                  60

Pro Ile Ser Leu Glu Ser Thr Leu Glu Ser Thr Val Ala Glu Gly Ser
65                  70                  75                  80

Leu Ile Pro Ser Glu Ser Thr Leu Glu Ser Thr Val Ala Glu Gly Ser
                85                  90                  95

Asp Ser Gly Leu Ala Leu Arg Leu Val Asn Gly Asp Gly Arg Cys Gln
            100                 105                 110

Gly Arg Val Glu Ile Leu Tyr Arg Gly Ser Trp Gly Thr Val Cys Asp
        115                 120                 125

Asp Ser Trp Asp Thr Asn Asp Ala Asn Val Val Cys Arg Gln Leu Gly
    130                 135                 140

Cys Gly Trp Ala Met Ser Ala Pro Gly Asn Ala Trp Phe Gly Gln Gly
145                 150                 155                 160

Ser Gly Pro Ile Ala Leu Asp Asp Val Arg Cys Ser Gly His Glu Ser
                165                 170                 175

Tyr Leu Trp Ser Cys Pro His Asn Gly Trp Leu Ser His Asn Cys Gly
            180                 185                 190

His Gly Glu Asp Ala Gly Val Ile Cys Ser Ala Ala Gln Pro Gln Ser
        195                 200                 205

Thr Leu Arg Pro Glu Ser Trp Pro Val Arg Ile Ser Pro Pro Val Pro
    210                 215                 220

Thr Glu Gly Ser Glu Ser Ser Leu Ala Leu Arg Leu Val Asn Gly Gly
225                 230                 235                 240

Asp Arg Cys Arg Gly Arg Val Glu Val Leu Tyr Arg Gly Ser Trp Gly
                245                 250                 255

Thr Val Cys Asp Asp Tyr Trp Asp Thr Asn Asp Ala Asn Val Val Cys
            260                 265                 270

Arg Gln Leu Gly Cys Gly Trp Ala Met Ser Ala Pro Gly Asn Ala Gln
        275                 280                 285
```

```
Phe Gly Gln Gly Ser Gly Pro Ile Val Leu Asp Asp Val Arg Cys Ser
    290                 295                 300

Gly His Glu Ser Tyr Leu Trp Ser Cys Pro His Asn Gly Trp Leu Thr
305                 310                 315                 320

His Asn Cys Gly His Ser Glu Asp Ala Gly Val Ile Cys Ser Ala Pro
                325                 330                 335

Gln Ser Arg Pro Thr Pro Ser Pro Asp Thr Trp Pro Thr Ser His Ala
            340                 345                 350

Ser Thr Ala Gly Pro Glu Ser Ser Leu Ala Leu Arg Leu Val Asn Gly
        355                 360                 365

Gly Asp Arg Cys Gln Gly Arg Val Glu Val Leu Tyr Arg Gly Ser Trp
    370                 375                 380

Gly Thr Val Cys Asp Asp Ser Trp Asp Thr Ser Asp Ala Asn Val Val
385                 390                 395                 400

Cys Arg Gln Leu Gly Cys Gly Trp Ala Thr Ser Ala Pro Gly Asn Ala
                405                 410                 415

Arg Phe Gly Gln Gly Ser Gly Pro Ile Val Leu Asp Asp Val Arg Cys
            420                 425                 430

Ser Gly Tyr Glu Ser Tyr Leu Trp Ser Cys Pro His Asn Gly Trp Leu
        435                 440                 445

Ser His Asn Cys Gln His Ser Glu Asp Ala Gly Val Ile Cys Ser Ala
    450                 455                 460

Ala His Ser Trp Ser Thr Pro Ser Pro Asp Thr Leu Pro Thr Ile Thr
465                 470                 475                 480

Leu Pro Ala Ser Thr Val Gly Ser Glu Ser Ser Leu Ala Leu Arg Leu
                485                 490                 495

Val Asn Gly Gly Asp Arg Cys Gln Gly Arg Val Glu Val Leu Tyr Arg
            500                 505                 510
```

Gly Ser Trp Gly Thr Val Cys Asp Asp Ser Trp Asp Thr Asn Asp Ala
515 520 525

Asn Val Val Cys Arg Gln Leu Gly Cys Gly Trp Ala Met Leu Ala Pro
530 535 540

Gly Asn Ala Arg Phe Gly Gln Gly Ser Gly Pro Ile Val Leu Asp Asp
545 550 555 560

Val Arg Cys Ser Gly Asn Glu Ser Tyr Leu Trp Ser Cys Pro His Asn
565 570 575

Gly Trp Leu Ser His Asn Cys Gly His Ser Glu Asp Ala Gly Val Ile
580 585 590

Cys Ser Gly Pro Glu Ser Ser Leu Ala Leu Arg Leu Val Asn Gly Gly
595 600 605

Asp Arg Cys Gln Gly Arg Val Glu Val Leu Tyr Arg Gly Ser Trp Gly
610 615 620

Thr Val Cys Asp Asp Ser Trp Asp Thr Asn Asp Ala Asn Val Val Cys
625 630 635 640

Arg Gln Leu Gly Cys Gly Trp Ala Met Ser Ala Pro Gly Asn Ala Arg
645 650 655

Phe Gly Gln Gly Ser Gly Pro Ile Val Leu Asp Asp Val Arg Cys Ser
660 665 670

Gly His Glu Ser Tyr Leu Trp Ser Cys Pro Asn Asn Gly Trp Leu Ser
675 680 685

His Asn Cys Gly His His Glu Asp Ala Gly Val Ile Cys Ser Ala Ala
690 695 700

Gln Ser Arg Ser Thr Pro Arg Pro Asp Thr Leu Ser Thr Ile Thr Leu
705 710 715 720

Pro Pro Ser Thr Val Gly Ser Glu Ser Ser Leu Thr Leu Arg Leu Val
725 730 735

Asn Gly Ser Asp Arg Cys Gln Gly Arg Val Glu Val Leu Tyr Arg Gly
740 745 750

```
Ser Trp Gly Thr Val Cys Asp Asp Ser Trp Asp Thr Asn Asp Ala Asn
        755                 760                 765

Val Val Cys Arg Gln Leu Gly Cys Gly Trp Ala Met Ser Ala Pro Gly
    770                 775                 780

Asn Ala Arg Phe Gly Gln Gly Ser Gly Pro Ile Val Leu Asp Asp Val
785                 790                 795                 800

Arg Cys Ser Gly His Glu Ser Tyr Leu Trp Ser Cys Pro His Asn Gly
                805                 810                 815

Trp Leu Ser His Asn Cys Gly His His Glu Asp Ala Gly Val Ile Cys
            820                 825                 830

Ser Val Ser Gln Ser Arg Pro Thr Pro Ser Pro Asp Thr Trp Pro Thr
        835                 840                 845

Ser His Ala Ser Thr Ala Gly Ser Glu Ser Ser Leu Ala Leu Arg Leu
    850                 855                 860

Val Asn Gly Gly Asp Arg Cys Gln Gly Arg Val Glu Val Leu Tyr Arg
865                 870                 875                 880

Gly Ser Trp Gly Thr Val Cys Asp Asp Ser Trp Asp Thr Ser Asp Ala
                885                 890                 895

Asn Val Val Cys Arg Gln Leu Gly Cys Gly Trp Ala Thr Ser Ala Pro
            900                 905                 910

Gly Asn Ala Arg Phe Gly Gln Gly Ser Gly Pro Ile Val Leu Asp Asp
        915                 920                 925

Val Arg Cys Ser Gly Tyr Glu Ser Tyr Leu Trp Ser Cys Pro His Asn
    930                 935                 940

Gly Trp Leu Ser His Asn Cys Gln His Ser Glu Asp Ala Gly Val Ile
945                 950                 955                 960

Cys Ser Ala Ala His Ser Trp Ser Thr Pro Ser Pro Asp Thr Leu Pro
                965                 970                 975
```

```
Thr Ile Thr Leu Pro Ala Ser Thr Val Gly Ser Glu Ser Ser Leu Ala
           980                 985                 990

Leu Arg Leu Val Asn Gly Gly Asp  Arg Cys Gln Gly Arg  Val Glu Val
        995                 1000                1005

Leu Tyr  Gln Gly Ser Trp Gly  Thr Val Cys Asp Asp  Ser Trp Asp
    1010                1015                1020

Thr Asn  Asp Ala Asn Val Val  Cys Arg Gln Pro Gly  Cys Gly Trp
    1025                1030                1035

Ala Met  Ser Ala Pro Gly Asn  Ala Arg Phe Gly Gln  Gly Ser Gly
    1040                1045                1050

Pro Ile  Val Leu Asp Asp Val  Arg Cys Ser Gly His  Glu Ser Tyr
    1055                1060                1065

Pro Trp  Ser Cys Pro His Asn  Gly Trp Leu Ser His  Asn Cys Gly
    1070                1075                1080

His Ser  Glu Asp Ala Gly Val  Ile Cys Ser Ala Ser  Gln Ser Arg
    1085                1090                1095

Pro Thr  Pro Ser Pro Asp Thr  Trp Pro Thr Ser His  Ala Ser Thr
    1100                1105                1110

Ala Gly  Ser Glu Ser Ser Leu  Ala Leu Arg Leu Val  Asn Gly Gly
    1115                1120                1125

Asp Arg  Cys Gln Gly Arg Val  Glu Val Leu Tyr Arg  Gly Ser Trp
    1130                1135                1140

Gly Thr  Val Cys Asp Asp Tyr  Trp Asp Thr Asn Asp  Ala Asn Val
    1145                1150                1155

Val Cys  Arg Gln Leu Gly Cys  Gly Trp Ala Met Ser  Ala Pro Gly
    1160                1165                1170

Asn Ala  Arg Phe Gly Gln Gly  Ser Gly Pro Ile Val  Leu Asp Asp
    1175                1180                1185

Val Arg  Cys Ser Gly His Glu  Ser Tyr Leu Trp Ser  Cys Pro His
    1190                1195                1200
```

```
Asn Gly  Trp Leu Ser His Asn  Cys Gly His His Glu  Asp Ala Gly
    1205                 1210                 1215

Val Ile  Cys Ser Ala Ser Gln  Ser Gln Pro Thr Pro  Ser Pro Asp
    1220                 1225                 1230

Thr Trp  Pro Thr Ser His Ala  Ser Thr Ala Gly Ser  Glu Ser Ser
    1235                 1240                 1245

Leu Ala  Leu Arg Leu Val Asn  Gly Gly Asp Arg Cys  Gln Gly Arg
    1250                 1255                 1260

Val Glu  Val Leu Tyr Arg Gly  Ser Trp Gly Thr Val  Cys Asp Asp
    1265                 1270                 1275

Tyr Trp  Asp Thr Asn Asp Ala  Asn Val Val Cys Arg  Gln Leu Gly
    1280                 1285                 1290

Cys Gly  Trp Ala Thr Ser Ala  Pro Gly Asn Ala Arg  Phe Gly Gln
    1295                 1300                 1305

Gly Ser  Gly Pro Ile Val Leu  Asp Asp Val Arg Cys  Ser Gly His
    1310                 1315                 1320

Glu Ser  Tyr Leu Trp Ser Cys  Pro His Asn Gly Trp  Leu Ser His
    1325                 1330                 1335

Asn Cys  Gly His His Glu Asp  Ala Gly Val Ile Cys  Ser Ala Ser
    1340                 1345                 1350

Gln Ser  Gln Pro Thr Pro Ser  Pro Asp Thr Trp Pro  Thr Ser His
    1355                 1360                 1365

Ala Ser  Thr Ala Gly Ser Glu  Ser Ser Leu Ala Leu  Arg Leu Val
    1370                 1375                 1380

Asn Gly  Gly Asp Arg Cys Gln  Gly Arg Val Glu Val  Leu Tyr Arg
    1385                 1390                 1395

Gly Ser  Trp Gly Thr Val Cys  Asp Asp Tyr Trp Asp  Thr Asn Asp
    1400                 1405                 1410
```

```
Ala Asn  Val Val Cys Arg Gln  Leu Gly Cys Gly Trp  Ala Thr Ser
    1415                 1420                 1425

Ala Pro  Gly Asn Ala Arg Phe  Gly Gln Gly Ser Gly  Pro Ile Val
    1430                 1435                 1440

Leu Asp  Asp Val Arg Cys Ser  Gly His Glu Ser Tyr  Leu Trp Ser
    1445                 1450                 1455

Cys Pro  His Asn Gly Trp Leu  Ser His Asn Cys Gly  His His Glu
    1460                 1465                 1470

Asp Ala  Gly Val Ile Cys Ser  Ala Ser Gln Ser Gln  Pro Thr Pro
    1475                 1480                 1485

Ser Pro  Asp Thr Trp Pro Thr  Ser Arg Ala Ser Thr  Ala Gly Ser
    1490                 1495                 1500

Glu Ser  Thr Leu Ala Leu Arg  Leu Val Asn Gly Gly  Asp Arg Cys
    1505                 1510                 1515

Arg Gly  Arg Val Glu Val Leu  Tyr Gln Gly Ser Trp  Gly Thr Val
    1520                 1525                 1530

Cys Asp  Asp Tyr Trp Asp Thr  Asn Asp Ala Asn Val  Val Cys Arg
    1535                 1540                 1545

Gln Leu  Gly Cys Gly Trp Ala  Met Ser Ala Pro Gly  Asn Ala Gln
    1550                 1555                 1560

Phe Gly  Gln Gly Ser Gly Pro  Ile Val Leu Asp Asp  Val Arg Cys
    1565                 1570                 1575

Ser Gly  His Glu Ser Tyr Leu  Trp Ser Cys Pro His  Asn Gly Trp
    1580                 1585                 1590

Leu Ser  His Asn Cys Gly His  His Glu Asp Ala Gly  Val Ile Cys
    1595                 1600                 1605

Ser Ala  Ala Gln Ser Gln Ser  Thr Pro Arg Pro Asp  Thr Trp Leu
    1610                 1615                 1620

Thr Thr  Asn Leu Pro Ala Leu  Thr Val Gly Ser Glu  Ser Ser Leu
    1625                 1630                 1635
```

```
Ala Leu  Arg Leu Val Asn Gly  Gly Asp Arg Cys Arg  Gly Arg Val
    1640                1645                1650

Glu Val  Leu Tyr Arg Gly Ser  Trp Gly Thr Val Cys  Asp Asp Ser
    1655                1660                1665

Trp Asp  Thr Asn Asp Ala Asn  Val Val Cys Arg Gln  Leu Gly Cys
    1670                1675                1680

Gly Trp  Ala Met Ser Ala Pro  Gly Asn Ala Arg Phe  Gly Gln Gly
    1685                1690                1695

Ser Gly  Pro Ile Val Leu Asp  Asp Val Arg Cys Ser  Gly Asn Glu
    1700                1705                1710

Ser Tyr  Leu Trp Ser Cys Pro  His Lys Gly Trp Leu  Thr His Asn
    1715                1720                1725

Cys Gly  His His Glu Asp Ala  Gly Val Ile Cys Ser  Ala Thr Gln
    1730                1735                1740

Ile Asn  Ser Thr Thr Thr Asp  Trp Trp His Pro Thr  Thr Thr Thr
    1745                1750                1755

Thr Ala  Arg Pro Ser Ser Asn  Cys Gly Gly Phe Leu  Phe Tyr Ala
    1760                1765                1770

Ser Gly  Thr Phe Ser Ser Pro  Ser Tyr Pro Ala Tyr  Tyr Pro Asn
    1775                1780                1785

Asn Ala  Lys Cys Val Trp Glu  Ile Glu Val Asn Ser  Gly Tyr Arg
    1790                1795                1800

Ile Asn  Leu Gly Phe Ser Asn  Leu Lys Leu Glu Ala  His His Asn
    1805                1810                1815

Cys Ser  Phe Asp Tyr Val Glu  Ile Phe Asp Gly Ser  Leu Asn Ser
    1820                1825                1830

Ser Leu  Leu Leu Gly Lys Ile  Cys Asn Asp Thr Arg  Gln Ile Phe
    1835                1840                1845
```

```
Thr Ser  Ser Tyr Asn Arg Met  Thr Ile His Phe Arg  Ser Asp Ile
    1850                 1855                 1860

Ser Phe  Gln Asn Thr Gly Phe  Leu Ala Trp Tyr Asn  Ser Phe Pro
    1865                 1870                 1875

Ser Asp  Ala Thr Leu Arg Leu  Val Asn Leu Asn Ser  Ser Tyr Gly
    1880                 1885                 1890

Leu Cys  Ala Gly Arg Val Glu  Ile Tyr His Gly Gly  Thr Trp Gly
    1895                 1900                 1905

Thr Val  Cys Asp Asp Ser Trp  Thr Ile Gln Glu Ala  Glu Val Val
    1910                 1915                 1920

Cys Arg  Gln Leu Gly Cys Gly  Arg Ala Val Ser Ala  Leu Gly Asn
    1925                 1930                 1935

Ala Tyr  Phe Gly Ser Gly Ser  Gly Pro Ile Thr Leu  Asp Asp Val
    1940                 1945                 1950

Glu Cys  Ser Gly Thr Glu Ser  Thr Leu Trp Gln Cys  Arg Asn Arg
    1955                 1960                 1965

Gly Trp  Phe Ser His Asn Cys  Asn His Arg Glu Asp  Ala Gly Val
    1970                 1975                 1980

Ile Cys  Ser Gly Asn His Leu  Ser Thr Pro Ala Pro  Phe Leu Asn
    1985                 1990                 1995

Ile Thr  Arg Pro Asn Thr Asp  Tyr Ser Cys Gly Gly  Phe Leu Ser
    2000                 2005                 2010

Gln Pro  Ser Gly Asp Phe Ser  Ser Pro Phe Tyr Pro  Gly Asn Tyr
    2015                 2020                 2025

Pro Asn  Asn Ala Lys Cys Val  Trp Asp Ile Glu Val  Gln Asn Asn
    2030                 2035                 2040

Tyr Arg  Val Thr Val Ile Phe  Arg Asp Val Gln Leu  Glu Gly Gly
    2045                 2050                 2055

Cys Asn  Tyr Asp Tyr Ile Glu  Val Phe Asp Gly Pro  Tyr Arg Ser
    2060                 2065                 2070
```

Ser Pro Leu Ile Ala Arg Val Cys Asp Gly Ala Arg Gly Ser Phe
2075 2080 2085

Thr Ser Ser Ser Asn Phe Met Ser Ile Arg Phe Ile Ser Asp His
2090 2095 2100

Ser Ile Thr Arg Arg Gly Phe Arg Ala Glu Tyr Tyr Ser Ser Pro
2105 2110 2115

Ser Asn Asp Ser Thr Asn Leu Leu Cys Leu Pro Asn His Met Gln
2120 2125 2130

Ala Ser Val Ser Arg Ser Tyr Leu Gln Ser Leu Gly Phe Ser Ala
2135 2140 2145

Ser Asp Leu Val Ile Ser Thr Trp Asn Gly Tyr Tyr Glu Cys Arg
2150 2155 2160

Pro Gln Ile Thr Pro Asn Leu Val Ile Phe Thr Ile Pro Tyr Ser
2165 2170 2175

Gly Cys Gly Thr Phe Lys Gln Ala Asp Asn Asp Thr Ile Asp Tyr
2180 2185 2190

Ser Asn Phe Leu Thr Ala Ala Val Ser Gly Gly Ile Ile Lys Arg
2195 2200 2205

Arg Thr Asp Leu Arg Ile His Val Ser Cys Arg Met Leu Gln Asn
2210 2215 2220

Thr Trp Val Asp Thr Met Tyr Ile Ala Asn Asp Thr Ile His Val
2225 2230 2235

Ala Asn Asn Thr Ile Gln Val Glu Glu Val Gln Tyr Gly Asn Phe
2240 2245 2250

Asp Val Asn Ile Ser Phe Tyr Thr Ser Ser Ser Phe Leu Tyr Pro
2255 2260 2265

Val Thr Ser Arg Pro Tyr Tyr Val Asp Leu Asn Gln Asp Leu Tyr
2270 2275 2280

```
Val Gln  Ala Glu Ile Leu His  Ser Asp Ala Val Leu  Thr Leu Phe
    2285                 2290                 2295

Val Asp  Thr Cys Val Ala Ser  Pro Tyr Ser Asn Asp  Phe Thr Ser
    2300                 2305                 2310

Leu Thr  Tyr Asp Leu Ile Arg  Ser Gly Cys Val Arg  Asp Asp Thr
    2315                 2320                 2325

Tyr Gly  Pro Tyr Ser Ser Pro  Ser Leu Arg Ile Ala  Arg Phe Arg
    2330                 2335                 2340

Phe Arg  Ala Phe His Phe Leu  Asn Arg Phe Pro Ser  Val Tyr Leu
    2345                 2350                 2355

Arg Cys  Lys Met Val Val Cys  Arg Ala Tyr Asp Pro  Ser Ser Arg
    2360                 2365                 2370

Cys Tyr  Arg Gly Cys Val Leu  Arg Ser Lys Arg Asp  Val Gly Ser
    2375                 2380                 2385

Tyr Gln  Glu Lys Val Asp Val  Val Leu Gly Pro Ile  Gln Leu Gln
    2390                 2395                 2400

Thr Pro  Pro Arg Arg Glu Glu  Glu Pro Arg
    2405                 2410
```

<210> 107
<211> 374
<212> PRT
<213> Mus musculus

<400> 107

```
Met Leu Pro Phe Leu Ser Met Leu Val Leu Leu Val Gln Pro Leu Gly
1               5                  10                  15

Asn Leu Gly Ala Glu Met Lys Ser Leu Ser Gln Arg Ser Val Pro Asn
            20                  25                  30

Thr Cys Thr Leu Val Met Cys Ser Pro Thr Glu Asn Gly Leu Pro Gly
        35                  40                  45

Arg Asp Gly Arg Asp Gly Arg Glu Gly Pro Arg Gly Glu Lys Gly Asp
    50                  55                  60
```

```
Pro Gly Leu Pro Gly Pro Met Gly Leu Ser Gly Leu Gln Gly Pro Thr
65                  70                  75                  80

Gly Pro Val Gly Pro Lys Gly Glu Asn Gly Ser Ala Gly Glu Pro Gly
                85                  90                  95

Pro Lys Gly Glu Arg Gly Leu Ser Gly Pro Pro Gly Leu Pro Gly Ile
            100                 105                 110

Pro Gly Pro Ala Gly Lys Glu Gly Pro Ser Gly Lys Gln Gly Asn Ile
        115                 120                 125

Gly Pro Gln Gly Lys Pro Gly Pro Lys Gly Glu Ala Gly Pro Lys Gly
    130                 135                 140

Glu Val Gly Ala Pro Gly Met Gln Gly Ser Thr Gly Ala Lys Gly Ser
145                 150                 155                 160

Thr Gly Pro Lys Gly Glu Arg Gly Ala Pro Gly Val Gln Gly Ala Pro
                165                 170                 175

Gly Asn Ala Gly Ala Ala Gly Pro Ala Gly Pro Ala Gly Pro Gln Gly
            180                 185                 190

Ala Pro Gly Ser Arg Gly Pro Pro Gly Leu Lys Gly Asp Arg Gly Val
        195                 200                 205

Pro Gly Asp Arg Gly Ile Lys Gly Glu Ser Gly Leu Pro Asp Ser Ala
    210                 215                 220

Ala Leu Arg Gln Gln Met Glu Ala Leu Lys Gly Lys Leu Gln Arg Leu
225                 230                 235                 240

Glu Val Ala Phe Ser His Tyr Gln Lys Ala Ala Leu Phe Pro Asp Gly
                245                 250                 255

Arg Ser Val Gly Asp Lys Ile Phe Arg Thr Ala Asp Ser Glu Lys Pro
            260                 265                 270

Phe Glu Asp Ala Gln Glu Met Cys Lys Gln Ala Gly Gly Gln Leu Ala
        275                 280                 285

Ser Pro Arg Ser Ala Thr Glu Asn Ala Ala Ile Gln Gln Leu Ile Thr
```

```
    290                 295                 300

Ala His Asn Lys Ala Ala Phe Leu Ser Met Thr Asp Val Gly Thr Glu
305                 310                 315                 320

Gly Lys Phe Thr Tyr Pro Thr Gly Glu Pro Leu Val Tyr Ser Asn Trp
                325                 330                 335

Ala Pro Gly Glu Pro Asn Asn Asn Gly Gly Ala Glu Asn Cys Val Glu
            340                 345                 350

Ile Phe Thr Asn Gly Gln Trp Asn Asp Lys Ala Cys Gly Glu Gln Arg
        355                 360                 365

Leu Val Ile Cys Glu Phe
    370
```

<210> 108
<211> 35
<212> PRT
<213> Canis familiaris

<400> 108

```
Leu Gly Ile Pro Cys Phe Pro Ser Ser Leu Lys Arg Leu Leu Ile Ile
1               5                   10                  15

Val Val Val Ile Val Leu Val Val Val Val Ile Val Gly Ala Leu Leu
            20                  25                  30

Met Gly Leu
        35
```

<210> 109
<211> 34
<212> PRT
<213> Bos taurus

<400> 109

```
Leu Ile Pro Cys Cys Pro Val Asn Ile Lys Arg Leu Leu Ile Val Val
1               5                   10                  15

Val Val Val Val Leu Leu Val Val Val Ile Val Gly Ala Leu Leu Met
            20                  25                  30

Gly Leu
```

<210> 110
<211> 35
<212> PRT
<213> Homo sapiens

<400> 110

Gly Gln Ser Ile Thr Phe Asp Ala Gly Lys Glu Gln Cys Val Glu Met
1 5 10 15

Tyr Thr Asp Gly Gln Trp Asn Asp Arg Asn Cys Leu Tyr Leu Thr Ile
20 25 30

Cys Glu Phe
35

<210> 111
<211> 370
<212> PRT
<213> Oryctolagus cuniculus

<400> 111

Met Ala Lys Ser His Leu Pro Pro Trp Leu Leu Leu Leu Leu Leu Pro
1 5 10 15

Thr Leu Cys Gly Pro Gly Thr Ala Val Trp Ala Thr Ser Pro Leu Ala
20 25 30

Cys Ala Gln Gly Pro Glu Phe Trp Cys Gln Ser Leu Glu Gln Ala Leu
35 40 45

Gln Cys Lys Ala Leu Gly His Cys Leu Gln Glu Val Trp Gly His Val
50 55 60

Gly Ala Asp Asp Leu Cys Gln Glu Cys Gln Asp Ile Val Asn Ile Leu
65 70 75 80

Thr Lys Met Thr Lys Glu Ala Ile Phe Gln Asp Thr Ile Arg Lys Phe
85 90 95

Leu Glu His Glu Cys Asp Val Leu Pro Leu Lys Leu Leu Val Pro Gln
100 105 110

Cys His His Val Leu Asp Val Tyr Phe Pro Leu Thr Ile Thr Tyr Phe

```
        115                 120                 125

Leu Ser Gln Ile Asn Ala Lys Ala Ile Cys Gln His Leu Gly Leu Cys
    130                 135                 140

Gln Pro Gly Ser Pro Glu Pro Pro Leu Asp Pro Leu Pro Asp Lys Leu
145                 150                 155                 160

Val Leu Pro Thr Leu Leu Gly Ala Leu Pro Ala Lys Pro Gly Pro His
                165                 170                 175

Thr Gln Asp Leu Ser Ala Gln Arg Phe Pro Ile Pro Leu Pro Leu Cys
            180                 185                 190

Trp Leu Cys Arg Thr Leu Leu Lys Arg Ile Gln Ala Met Ile Pro Lys
        195                 200                 205

Gly Val Leu Ala Met Ala Val Ala Gln Val Cys His Val Val Pro Leu
    210                 215                 220

Val Val Gly Gly Ile Cys Gln Cys Leu Ala Glu Arg Tyr Thr Val Ile
225                 230                 235                 240

Leu Leu Glu Val Leu Leu Gly His Val Leu Pro Gln Leu Val Cys Gly
                245                 250                 255

Leu Val Leu Arg Cys Ser Ser Val Asp Ser Ile Gly Gln Val Pro Pro
            260                 265                 270

Thr Leu Glu Ala Leu Pro Gly Glu Trp Leu Pro Gln Asp Pro Glu Cys
        275                 280                 285

Pro Leu Cys Met Ser Val Thr Thr Gln Ala Arg Asn Ile Ser Glu Gln
    290                 295                 300

Thr Arg Pro Gln Ala Val Tyr His Ala Cys Leu Ser Ser Gln Leu Asp
305                 310                 315                 320

Lys Gln Glu Cys Glu Gln Phe Val Glu Leu His Thr Pro Gln Leu Leu
                325                 330                 335

Ser Leu Leu Ser Arg Gly Trp Asp Ala Arg Ala Ile Cys Gln Ala Leu
            340                 345                 350
```

```
Gly Ala Cys Val Ala Thr Leu Ser Pro Leu Gln Cys Ile Gln Ser Pro
        355                 360                 365


His Phe
    370
```

<210> 112
<211> 247
<212> PRT
<213> Oryctolagus cuniculus

<400> 112

```
Met Leu Leu Leu Ser Leu Ala Leu Thr Leu Ile Ser Ala Pro Ala Ser
1               5                   10                  15


Asp Thr Cys Asp Thr Lys Asp Val Cys Ile Gly Ser Pro Gly Ile Pro
            20                  25                  30


Gly Thr Pro Gly Ser His Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly
        35                  40                  45


Val Lys Gly Asp Pro Gly Pro Pro Gly Pro Met Gly Pro Pro Gly Gly
    50                  55                  60


Met Pro Gly Leu Pro Gly Arg Asp Gly Leu Ile Gly Ala Pro Gly Val
65                  70                  75                  80


Pro Gly Glu Arg Gly Asp Lys Gly Glu Pro Gly Glu Arg Gly Pro Pro
                85                  90                  95


Gly Leu Pro Ala Tyr Leu Asp Glu Glu Leu Gln Ala Thr Leu His Glu
            100                 105                 110


Leu Arg His His Ala Leu Gln Ser Ile Gly Val Leu Ser Leu Gln Gly
        115                 120                 125


Ser Met Lys Ala Val Gly Glu Lys Ile Phe Ser Thr Asn Gly Gln Ser
    130                 135                 140


Val Asn Phe Asp Ala Ile Arg Glu Val Cys Ala Arg Ala Gly Gly Arg
145                 150                 155                 160


Ile Ala Ile Val Lys Glu Val Pro Arg Ser Leu Glu Glu Asn Glu Ala
                165                 170                 175
```

```
Ile Ala Ser Arg Asn Thr Tyr Ala Tyr Leu Gly Leu Ala Glu Gly Pro
            180                 185                 190

Thr Ala Gly Asp Phe Tyr Tyr Leu Asp Gly Asp Pro Val Asn Tyr Thr
        195                 200                 205

Asn Trp Tyr Pro Gly Glu Pro Arg Gly Gln Gly Arg Glu Lys Cys Val
    210                 215                 220

Glu Met Tyr Thr Asp Gly Lys Trp Asn Asp Lys Asn Cys Leu Gln Tyr
225                 230                 235                 240

Arg Leu Val Ile Cys Glu Phe
                245
```

<210> 113
<211> 369
<212> PRT
<213> Bos taurus

<400> 113

```
Met Leu Leu Leu Pro Leu Ser Val Leu Leu Leu Leu Thr Gln Pro Trp
1               5                   10                  15

Arg Ser Leu Gly Ala Glu Met Lys Ile Tyr Ser Gln Lys Thr Met Ala
            20                  25                  30

Asn Ala Cys Thr Leu Val Met Cys Ser Pro Pro Glu Asp Gly Leu Pro
        35                  40                  45

Gly Arg Asp Gly Arg Asp Gly Arg Glu Gly Pro Arg Gly Glu Lys Gly
    50                  55                  60

Asp Pro Gly Ser Pro Gly Pro Ala Gly Arg Ala Gly Met Pro Gly Pro
65                  70                  75                  80

Ala Gly Pro Ile Gly Leu Lys Gly Asp Asn Gly Ser Ala Gly Glu Pro
                85                  90                  95

Gly Pro Lys Gly Asp Thr Gly Pro Pro Gly Pro Pro Gly Met Pro Gly
            100                 105                 110

Pro Ala Gly Arg Glu Gly Pro Ser Gly Lys Gln Gly Ser Met Gly Pro
```

```
        115                 120                 125

Pro Gly Thr Pro Gly Pro Lys Gly Asp Thr Gly Pro Lys Gly Gly Val
    130                 135                 140

Gly Ala Pro Gly Ile Gln Gly Ser Pro Gly Pro Ala Gly Leu Lys Gly
145                 150                 155                 160

Glu Arg Gly Ala Pro Gly Glu Pro Gly Ala Pro Gly Arg Ala Gly Ala
                165                 170                 175

Pro Gly Pro Ala Gly Ala Ile Gly Pro Gln Gly Pro Ser Gly Ala Arg
            180                 185                 190

Gly Pro Pro Gly Leu Lys Gly Asp Arg Gly Thr Pro Gly Glu Arg Gly
        195                 200                 205

Ala Lys Gly Glu Ser Gly Leu Ala Glu Val Asn Ala Leu Arg Gln Arg
    210                 215                 220

Val Gly Ile Leu Glu Gly Gln Leu Gln Arg Leu Gln Asn Ala Phe Ser
225                 230                 235                 240

Gln Tyr Lys Lys Ala Met Leu Phe Pro Asn Gly Arg Ser Val Gly Glu
                245                 250                 255

Lys Ile Phe Lys Thr Val Gly Ser Glu Lys Thr Phe Gln Asp Ala Gln
            260                 265                 270

Gln Ile Cys Thr Gln Ala Gly Gly Gln Leu Pro Ser Pro Arg Ser Gly
        275                 280                 285

Ala Glu Asn Glu Ala Leu Thr Gln Leu Ala Thr Ala Gln Asn Lys Ala
    290                 295                 300

Ala Phe Leu Ser Met Ser Asp Thr Arg Lys Glu Gly Thr Phe Ile Tyr
305                 310                 315                 320

Pro Thr Gly Glu Pro Leu Val Tyr Ser Asn Trp Ala Pro Gln Glu Pro
                325                 330                 335

Asn Asn Asp Gly Gly Ser Glu Asn Cys Val Glu Ile Phe Pro Asn Gly
            340                 345                 350
```

```
Lys Trp Asn Asp Lys Val Cys Gly Glu Gln Arg Leu Val Ile Cys Glu
        355                 360                 365

Phe
```

<210> 114
<211> 301
<212> PRT
<213> Bos taurus

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> Unknown

<400> 114

```
Glu Glu Met Asp Val Tyr Xaa Glu Lys Thr Leu Thr Asp Pro Cys Thr
1               5                   10                  15

Leu Val Val Cys Ala Pro Pro Ala Asp Ser Leu Arg Gly His Asp Gly
            20                  25                  30

Arg Asp Gly Lys Glu Gly Pro Gln Gly Glu Lys Gly Asp Pro Gly Pro
        35                  40                  45

Pro Gly Met Pro Gly Pro Ala Gly Arg Glu Gly Pro Ser Gly Arg Gln
    50                  55                  60

Gly Ser Met Gly Pro Pro Gly Thr Pro Gly Pro Lys Gly Glu Pro Gly
65                  70                  75                  80

Pro Glu Gly Gly Val Gly Ala Pro Gly Met Pro Gly Ser Pro Gly Pro
                85                  90                  95

Ala Gly Leu Lys Gly Glu Arg Gly Ala Pro Gly Pro Gly Gly Ala Ile
            100                 105                 110

Gly Pro Gln Gly Pro Ser Gly Ala Met Gly Pro Pro Gly Leu Lys Gly
        115                 120                 125

Asp Arg Gly Asp Pro Gly Glu Lys Gly Ala Arg Gly Glu Thr Ser Val
    130                 135                 140
```

```
Leu Glu Val Asp Thr Leu Arg Gln Arg Met Arg Asn Leu Glu Gly Glu
145                 150                 155                 160

Val Gln Arg Leu Gln Asn Ile Val Thr Gln Tyr Arg Lys Ala Val Leu
                165                 170                 175

Phe Pro Asp Gly Gln Ala Val Gly Glu Lys Ile Phe Lys Thr Ala Gly
            180                 185                 190

Ala Val Lys Ser Tyr Ser Asp Ala Glu Gln Leu Cys Arg Glu Ala Lys
        195                 200                 205

Gly Gln Leu Ala Ser Pro Arg Ser Ser Ala Glu Asn Glu Ala Val Thr
    210                 215                 220

Gln Leu Val Arg Ala Lys Asn Lys His Ala Tyr Leu Ser Met Asn Asp
225                 230                 235                 240

Ile Ser Lys Glu Gly Lys Phe Thr Tyr Pro Thr Gly Gly Ser Leu Asp
                245                 250                 255

Tyr Ser Asn Trp Ala Pro Gly Glu Pro Gly Asn Arg Ala Lys Asp Glu
            260                 265                 270

Gly Pro Glu Asn Cys Leu Glu Ile Tyr Ser Asp Gly Asn Trp Asn Asp
        275                 280                 285

Ile Glu Cys Arg Glu Glu Arg Leu Val Ile Cys Glu Phe
    290                 295                 300
```

<210> 115
<211> 375
<212> PRT
<213> Homo sapiens

<400> 115

```
Met Leu Leu Phe Leu Leu Ser Ala Leu Val Leu Leu Thr Gln Pro Leu
1               5                   10                  15

Gly Tyr Leu Glu Ala Glu Met Lys Thr Tyr Ser His Arg Thr Thr Pro
            20                  25                  30

Ser Ala Cys Thr Leu Val Met Cys Ser Ser Val Glu Ser Gly Leu Pro
        35                  40                  45
```

Gly Arg Asp Gly Arg Asp Gly Arg Glu Gly Pro Arg Gly Glu Lys Gly
50 55 60

Asp Pro Gly Leu Pro Gly Ala Ala Gly Gln Ala Gly Met Pro Gly Gln
65 70 75 80

Ala Gly Pro Val Gly Pro Lys Gly Asp Asn Gly Ser Val Gly Glu Pro
85 90 95

Gly Pro Lys Gly Asp Thr Gly Pro Ser Gly Pro Pro Gly Pro Pro Gly
100 105 110

Val Pro Gly Pro Ala Gly Arg Glu Gly Pro Leu Gly Lys Gln Gly Asn
115 120 125

Ile Gly Pro Gln Gly Lys Pro Gly Pro Lys Gly Glu Ala Gly Pro Lys
130 135 140

Gly Glu Val Gly Ala Pro Gly Met Gln Gly Ser Ala Gly Ala Arg Gly
145 150 155 160

Leu Ala Gly Pro Lys Gly Glu Arg Gly Val Pro Gly Glu Arg Gly Val
165 170 175

Pro Gly Asn Ala Gly Ala Ala Gly Ser Ala Gly Ala Met Gly Pro Gln
180 185 190

Gly Ser Pro Gly Ala Arg Gly Pro Pro Gly Leu Lys Gly Asp Lys Gly
195 200 205

Ile Pro Gly Asp Lys Gly Ala Lys Gly Glu Ser Gly Leu Pro Asp Val
210 215 220

Ala Ser Leu Arg Gln Gln Val Glu Ala Leu Gln Gly Gln Val Gln His
225 230 235 240

Leu Gln Ala Ala Phe Ser Gln Tyr Lys Lys Val Glu Leu Phe Pro Asn
245 250 255

Gly Gln Ser Val Gly Glu Lys Ile Phe Lys Thr Ala Gly Phe Val Lys
260 265 270

Pro Phe Thr Glu Ala Gln Leu Leu Cys Thr Gln Ala Gly Gly Gln Leu

```
        275                 280                 285

Ala Ser Pro Arg Ser Ala Ala Glu Asn Ala Ala Leu Gln Gln Leu Val
    290                 295                 300

Val Ala Lys Asn Glu Ala Ala Phe Leu Ser Met Thr Asp Ser Lys Thr
305                 310                 315                 320

Glu Gly Lys Phe Thr Tyr Pro Thr Gly Glu Ser Leu Val Tyr Ser Asn
                325                 330                 335

Trp Ala Pro Gly Glu Pro Asn Asp Asp Gly Gly Ser Glu Asp Cys Val
            340                 345                 350

Glu Ile Phe Thr Asn Gly Lys Trp Asn Asp Arg Ala Cys Gly Glu Lys
        355                 360                 365

Arg Leu Val Val Cys Glu Phe
    370                 375
```

<210> 116
<211> 194
<212> PRT
<213> Rattus norvegicus

<400> 116

```
Met Asp Met Gly Ser Lys Glu Val Leu Met Glu Ser Pro Pro Asp Tyr
1               5                   10                  15

Ser Thr Gly Pro Arg Ser Gln Phe Arg Ile Pro Cys Cys Pro Val His
            20                  25                  30

Leu Lys Arg Leu Leu Ile Val Val Val Val Val Val Leu Val Val Val
        35                  40                  45

Val Ile Val Gly Ala Leu Leu Met Gly Leu His Met Ser Gln Lys His
    50                  55                  60

Thr Glu Met Val Leu Glu Met Ser Ile Gly Gly Ala Pro Glu Thr Gln
65                  70                  75                  80

Lys Arg Leu Ala Leu Ser Glu His Thr Asp Thr Ile Ala Thr Phe Ser
                85                  90                  95
```

```
Ile Gly Ser Thr Gly Ile Val Leu Tyr Asp Tyr Gln Arg Leu Leu Thr
            100                 105                 110

Ala Tyr Lys Pro Ala Pro Gly Thr Tyr Cys Tyr Ile Met Lys Met Ala
        115                 120                 125

Pro Glu Ser Ile Pro Ser Leu Glu Ala Leu Ala Arg Lys Phe Lys Asn
    130                 135                 140

Phe Gln Ala Lys Ser Ser Thr Pro Thr Ser Lys Leu Gly Gln Glu Glu
145                 150                 155                 160

Gly His Ser Ala Gly Ser Asp Ser Asp Ser Ser Gly Arg Asp Leu Ala
                165                 170                 175

Phe Leu Gly Leu Ala Val Ser Thr Leu Cys Gly Val Leu Pro Leu Tyr
            180                 185                 190

Tyr Ile
```

<210> 117
<211> 247
<212> PRT
<213> Oryctolagus cuniculus

<400> 117

```
Met Leu Leu Leu Ser Leu Ala Leu Thr Leu Ile Ser Ala Pro Ala Ser
1               5                   10                  15

Asp Thr Cys Asp Thr Lys Asp Val Cys Ile Gly Ser Pro Gly Ile Pro
            20                  25                  30

Gly Thr Pro Gly Ser His Gly Leu Pro Gly Arg Asp Gly Arg Asp Gly
        35                  40                  45

Val Lys Gly Asp Pro Gly Pro Pro Ala Pro Trp Ala Pro Pro Gly Gly
    50                  55                  60

Met Pro Gly Leu Pro Gly Arg Asp Gly Leu Ile Gly Ala Pro Gly Val
65                  70                  75                  80

Pro Gly Glu Arg Gly Asp Lys Gly Glu Pro Gly Glu Arg Gly Pro Pro
                85                  90                  95
```

```
Gly Leu Pro Ala Tyr Leu Asp Glu Glu Leu Gln Ala Thr Leu His Glu
            100                 105                 110

Leu Arg His His Ala Leu Gln Ser Ile Gly Val Leu Ser Leu Gln Gly
        115                 120                 125

Ser Met Lys Ala Val Gly Glu Lys Ile Phe Ser Thr Asn Gly Gln Ser
    130                 135                 140

Val Asn Phe Asp Ala Ile Arg Glu Val Cys Ala Arg Ala Gly Gly Arg
145                 150                 155                 160

Ile Ala Val Pro Arg Ser Leu Glu Glu Asn Glu Ala Ile Ala Ser Ile
                165                 170                 175

Val Lys Glu Arg Asn Thr Tyr Ala Tyr Leu Gly Leu Ala Glu Gly Pro
            180                 185                 190

Thr Ala Gly Asp Phe Tyr Tyr Leu Asp Gly Asp Pro Val Asn Tyr Thr
        195                 200                 205

Asn Trp Tyr Pro Gly Glu Pro Arg Gly Gln Gly Arg Glu Lys Cys Val
    210                 215                 220

Glu Met Tyr Thr Asp Gly Lys Trp Asn Asp Lys Asn Cys Leu Gln Tyr
225                 230                 235                 240

Arg Leu Val Ile Cys Glu Phe
                245
```

<210> 118
<211> 251
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (25)..(130)
<223> Polypeptide sequence from ficolin dom aa131

<220>
<221> MISC_FEATURE
<222> (131)..(251)
<223> Polypeptide sequence from MBL aa129

<400> 118

```
Met Glu Leu Asp Arg Ala Val Gly Val Leu Gly Ala Ala Thr Leu Leu
1               5                  10                  15

Leu Ser Phe Leu Gly Met Ala Trp Ala Leu Gln Ala Ala Asp Thr Cys
            20                  25                  30

Pro Glu Val Lys Met Val Gly Leu Glu Gly Ser Asp Lys Leu Thr Ile
        35                  40                  45

Leu Arg Gly Cys Pro Gly Leu Pro Gly Ala Pro Gly Asp Lys Gly Glu
    50                  55                  60

Ala Gly Thr Asn Gly Lys Arg Gly Glu Arg Gly Pro Pro Gly Pro Pro
65                  70                  75                  80

Gly Lys Ala Gly Pro Pro Gly Pro Asn Gly Ala Pro Gly Glu Pro Gln
                85                  90                  95

Pro Cys Leu Thr Gly Pro Arg Thr Cys Lys Asp Leu Leu Asp Arg Gly
            100                 105                 110

His Phe Leu Ser Gly Trp His Thr Ile Tyr Leu Pro Asp Cys Arg Pro
        115                 120                 125

Leu Thr Phe Ser Leu Gly Lys Gln Val Gly Asn Lys Phe Phe Leu Thr
    130                 135                 140

Asn Gly Glu Ile Met Thr Phe Glu Lys Val Lys Ala Leu Cys Val Lys
145                 150                 155                 160

Phe Gln Ala Ser Val Ala Thr Pro Arg Asn Ala Ala Glu Asn Gly Ala
                165                 170                 175

Ile Gln Asn Leu Ile Lys Glu Glu Ala Phe Leu Gly Ile Thr Asp Glu
            180                 185                 190

Lys Thr Glu Gly Gln Phe Val Asp Leu Thr Gly Asn Arg Leu Thr Tyr
        195                 200                 205

Thr Asn Trp Asn Glu Gly Glu Pro Asn Asn Ala Gly Ser Asp Glu Asp
    210                 215                 220

Cys Val Leu Leu Leu Lys Asn Gly Gln Trp Asn Asp Val Pro Cys Ser
```

225 230 235 240

Thr Ser His Leu Ala Val Cys Glu Phe Pro Ile
245 250

<210> 119
<211> 329
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (25)..(206)
<223> Polypeptide sequence from ficolin-dom. containing pred. coil-coil to aa207

<220>
<221> MISC_FEATURE
<222> (207)..(329)
<223> Polypeptide sequence from MBL

<400> 119

Met Glu Leu Asp Arg Ala Val Gly Val Leu Gly Ala Ala Thr Leu Leu
1 5 10 15

Leu Ser Phe Leu Gly Met Ala Trp Ala Leu Gln Ala Ala Asp Thr Cys
20 25 30

Pro Glu Val Lys Met Val Gly Leu Glu Gly Ser Asp Lys Leu Thr Ile
35 40 45

Leu Arg Gly Cys Pro Gly Leu Pro Gly Ala Pro Gly Asp Lys Gly Glu
50 55 60

Ala Gly Thr Asn Gly Lys Arg Gly Glu Arg Gly Pro Pro Gly Pro Pro
65 70 75 80

Gly Lys Ala Gly Pro Pro Gly Pro Asn Gly Ala Pro Gly Glu Pro Gln
85 90 95

Pro Cys Leu Thr Gly Pro Arg Thr Cys Lys Asp Leu Leu Asp Arg Gly
100 105 110

His Phe Leu Ser Gly Trp His Thr Ile Tyr Leu Pro Asp Cys Arg Pro
115 120 125

```
Leu Thr Val Leu Cys Asp Met Asp Thr Asp Gly Gly Gly Trp Thr Val
    130                 135                 140

Phe Gln Arg Arg Val Asp Gly Ser Val Asp Phe Tyr Arg Asp Trp Ala
145                 150                 155                 160

Thr Tyr Lys Gln Gly Phe Gly Ser Arg Leu Gly Glu Phe Trp Leu Gly
                165                 170                 175

Asn Asp Asn Ile His Ala Leu Thr Ala Gln Gly Thr Ser Glu Leu Arg
            180                 185                 190

Val Asp Leu Val Asp Phe Glu Asp Asn Tyr Gln Phe Ala Lys Leu Thr
        195                 200                 205

Phe Ser Leu Gly Lys Gln Val Gly Asn Lys Phe Phe Leu Thr Asn Gly
    210                 215                 220

Glu Ile Met Thr Phe Glu Lys Val Lys Ala Leu Cys Val Lys Phe Gln
225                 230                 235                 240

Ala Ser Val Ala Thr Pro Arg Asn Ala Ala Glu Asn Gly Ala Ile Gln
                245                 250                 255

Asn Leu Ile Lys Glu Glu Ala Phe Leu Gly Ile Thr Asp Glu Lys Thr
            260                 265                 270

Glu Gly Gln Phe Val Asp Leu Thr Gly Asn Arg Leu Thr Tyr Thr Asn
        275                 280                 285

Trp Asn Glu Gly Glu Pro Asn Asn Ala Gly Ser Asp Glu Asp Cys Val
    290                 295                 300

Leu Leu Leu Lys Asn Gly Gln Trp Asn Asp Val Pro Cys Ser Thr Ser
305                 310                 315                 320

His Leu Ala Val Cys Glu Phe Pro Ile
                325
```

<210> 120
<211> 240
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (25)..(91)
<223> Polypeptide sequence from collagen

<220>
<221> MISC_FEATURE
<222> (92)..(240)
<223> Polypeptide sequence from MBL

<400> 120

Met Glu Leu Asp Arg Ala Val Gly Val Leu Gly Ala Ala Thr Leu Leu
1 5 10 15

Leu Ser Phe Leu Gly Met Ala Trp Ala Leu Gln Ala Ala Asp Thr Cys
20 25 30

Pro Glu Val Lys Met Val Gly Leu Glu Gly Ser Asp Lys Leu Thr Ile
35 40 45

Leu Arg Gly Cys Pro Gly Leu Pro Gly Ala Pro Gly Asp Lys Gly Glu
50 55 60

Ala Gly Thr Asn Gly Lys Arg Gly Glu Arg Gly Pro Pro Gly Pro Pro
65 70 75 80

Gly Lys Ala Gly Pro Pro Gly Pro Asn Gly Ala Pro Pro Asp Gly Asp
85 90 95

Ser Ser Leu Ala Ala Ser Glu Arg Lys Ala Leu Gln Thr Glu Met Ala
100 105 110

Arg Ile Lys Lys Trp Leu Thr Phe Ser Leu Gly Lys Gln Val Gly Asn
115 120 125

Lys Phe Phe Leu Thr Asn Gly Glu Ile Met Thr Phe Glu Lys Val Lys
130 135 140

Ala Leu Cys Val Lys Phe Gln Ala Ser Val Ala Thr Pro Arg Asn Ala
145 150 155 160

Ala Glu Asn Gly Ala Ile Gln Asn Leu Ile Lys Glu Glu Ala Phe Leu
165 170 175

Gly Ile Thr Asp Glu Lys Thr Glu Gly Gln Phe Val Asp Leu Thr Gly
180 185 190

```
Asn Arg Leu Thr Tyr Thr Asn Trp Asn Glu Gly Glu Pro Asn Asn Ala
        195                 200                 205

Gly Ser Asp Glu Asp Cys Val Leu Leu Leu Lys Asn Gly Gln Trp Asn
    210                 215                 220

Asp Val Pro Cys Ser Thr Ser His Leu Ala Val Cys Glu Phe Pro Ile
225                 230                 235                 240
```

<210> 121
<211> 255
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (25)..(82)
<223> Polypeptide sequence from collagen to cons.K at aa 93

<220>
<221> MISC_FEATURE
<222> (83)..(255)
<223> Polypeptide sequence from MBL

<400> 121

```
Met Glu Leu Asp Arg Ala Val Gly Val Leu Gly Ala Ala Thr Leu Leu
1               5                   10                  15

Leu Ser Phe Leu Gly Met Ala Trp Ala Leu Gln Ala Ala Asp Thr Cys
            20                  25                  30

Pro Glu Val Lys Met Val Gly Leu Glu Gly Ser Asp Lys Leu Thr Ile
        35                  40                  45

Leu Arg Gly Cys Pro Gly Leu Pro Gly Ala Pro Gly Asp Lys Gly Glu
    50                  55                  60

Ala Gly Thr Asn Gly Lys Arg Gly Glu Arg Gly Pro Pro Gly Pro Pro
65                  70                  75                  80

Gly Lys Leu Gly Pro Pro Gly Asn Pro Gly Pro Ser Gly Ser Pro Gly
                85                  90                  95

Pro Lys Gly Gln Lys Gly Asp Pro Gly Lys Ser Pro Asp Gly Asp Ser
            100                 105                 110
```

```
Ser Leu Ala Ala Ser Glu Arg Lys Ala Leu Gln Thr Glu Met Ala Arg
        115                 120                 125

Ile Lys Lys Trp Leu Thr Phe Ser Leu Gly Lys Gln Val Gly Asn Lys
    130                 135                 140

Phe Phe Leu Thr Asn Gly Glu Ile Met Thr Phe Glu Lys Val Lys Ala
145                 150                 155                 160

Leu Cys Val Lys Phe Gln Ala Ser Val Ala Thr Pro Arg Asn Ala Ala
                165                 170                 175

Glu Asn Gly Ala Ile Gln Asn Leu Ile Lys Glu Glu Ala Phe Leu Gly
            180                 185                 190

Ile Thr Asp Glu Lys Thr Glu Gly Gln Phe Val Asp Leu Thr Gly Asn
        195                 200                 205

Arg Leu Thr Tyr Thr Asn Trp Asn Glu Gly Glu Pro Asn Asn Ala Gly
    210                 215                 220

Ser Asp Glu Asp Cys Val Leu Leu Leu Lys Asn Gly Gln Trp Asn Asp
225                 230                 235                 240

Val Pro Cys Ser Thr Ser His Leu Ala Val Cys Glu Phe Pro Ile
                245                 250                 255


<210>  122
<211>  254
<212>  PRT
<213>  Homo sapiens


<220>
<221>  MISC_FEATURE
<222>  (25)..(69)
<223>  Polypeptide sequence from collagen

<220>
<221>  MISC_FEATURE
<222>  (70)..(254)
<223>  Polypeptide sequence from MBL

<400>  122

Met Glu Leu Asp Arg Ala Val Gly Val Leu Gly Ala Ala Thr Leu Leu
1               5                   10                  15
```

```
Leu Ser Phe Leu Gly Met Ala Trp Ala Leu Gln Ala Ala Asp Thr Cys
            20                  25                  30

Pro Glu Val Lys Met Val Gly Leu Glu Gly Ser Asp Lys Leu Thr Ile
        35                  40                  45

Leu Arg Gly Cys Pro Gly Leu Pro Gly Ala Pro Gly Asp Lys Gly Glu
    50                  55                  60

Ala Gly Thr Asn Gly Gln Gly Leu Arg Gly Leu Gln Gly Pro Pro Gly
65                  70                  75                  80

Lys Leu Gly Pro Pro Gly Asn Pro Gly Pro Ser Gly Ser Pro Gly Pro
                85                  90                  95

Lys Gly Gln Lys Gly Asp Pro Gly Lys Ser Pro Asp Gly Asp Ser Ser
            100                 105                 110

Leu Ala Ala Ser Glu Arg Lys Ala Leu Gln Thr Glu Met Ala Arg Ile
        115                 120                 125

Lys Lys Trp Leu Thr Phe Ser Leu Gly Lys Gln Val Gly Asn Lys Phe
    130                 135                 140

Phe Leu Thr Asn Gly Glu Ile Met Thr Phe Glu Lys Val Lys Ala Leu
145                 150                 155                 160

Cys Val Lys Phe Gln Ala Ser Val Ala Thr Pro Arg Asn Ala Ala Glu
                165                 170                 175

Asn Gly Ala Ile Gln Asn Leu Ile Lys Glu Glu Ala Phe Leu Gly Ile
            180                 185                 190

Thr Asp Glu Lys Thr Glu Gly Gln Phe Val Asp Leu Thr Gly Asn Arg
        195                 200                 205

Leu Thr Tyr Thr Asn Trp Asn Glu Gly Glu Pro Asn Asn Ala Gly Ser
    210                 215                 220

Asp Glu Asp Cys Val Leu Leu Leu Lys Asn Gly Gln Trp Asn Asp Val
225                 230                 235                 240
```

```
Pro Cys Ser Thr Ser His Leu Ala Val Cys Glu Phe Pro Ile
                245                 250


<210>  123
<211>  232
<212>  PRT
<213>  Homo sapiens


<220>
<221>  MISC_FEATURE
<222>  (21)..(41)
<223>  Polypeptide sequence from MBL collagen

<220>
<221>  MISC_FEATURE
<222>  (42)..(232)
<223>  Polypeptide sequence from collagen

<400>  123

Met Ser Leu Phe Pro Ser Leu Pro Leu Leu Leu Leu Ser Met Val Ala
1               5                   10                  15


Ala Ser Tyr Ser Glu Thr Val Thr Cys Glu Asp Ala Gln Lys Thr Cys
            20                  25                  30


Pro Ala Val Ile Ala Cys Ser Ser Pro Gly Cys Pro Gly Leu Pro Gly
        35                  40                  45


Ala Pro Gly Asp Lys Gly Glu Ala Gly Thr Asn Gly Lys Arg Gly Glu
    50                  55                  60


Arg Gly Pro Pro Gly Pro Pro Gly Lys Ala Gly Pro Pro Gly Pro Asn
65                  70                  75                  80


Gly Ala Pro Ser Pro Asp Gly Asp Ser Ser Leu Ala Ala Ser Glu Arg
                85                  90                  95


Lys Ala Leu Gln Thr Glu Met Ala Arg Ile Lys Lys Trp Leu Thr Phe
            100                 105                 110


Ser Leu Gly Lys Gln Val Gly Asn Lys Phe Phe Leu Thr Asn Gly Glu
        115                 120                 125


Ile Met Thr Phe Glu Lys Val Lys Ala Leu Cys Val Lys Phe Gln Ala
    130                 135                 140
```

```
Ser Val Ala Thr Pro Arg Asn Ala Ala Glu Asn Gly Ala Ile Gln Asn
145                 150                 155                 160


Leu Ile Lys Glu Glu Ala Phe Leu Gly Ile Thr Asp Glu Lys Thr Glu
                165                 170                 175


Gly Gln Phe Val Asp Leu Thr Gly Asn Arg Leu Thr Tyr Thr Asn Trp
            180                 185                 190


Asn Glu Gly Glu Pro Asn Asn Ala Gly Ser Asp Glu Asp Cys Val Leu
        195                 200                 205


Leu Leu Lys Asn Gly Gln Trp Asn Asp Val Pro Cys Ser Thr Ser His
    210                 215                 220


Leu Ala Val Cys Glu Phe Pro Ile
225                 230


<210>  124
<211>  237
<212>  PRT
<213>  Homo sapiens


<220>
<221>  MISC_FEATURE
<222>  (21)..(89)
<223>  Polypeptide sequence from collagen

<220>
<221>  MISC_FEATURE
<222>  (90)..(237)
<223>  Polypeptide sequence from MBL

<400>  124

Met Ser Leu Phe Pro Ser Leu Pro Leu Leu Leu Leu Ser Met Val Ala
1               5                   10                  15


Ala Ser Tyr Ser Ala Leu Gln Ala Ala Asp Thr Cys Pro Glu Val Lys
            20                  25                  30


Met Val Gly Leu Glu Gly Ser Asp Lys Leu Thr Ile Leu Arg Gly Cys
        35                  40                  45


Pro Gly Leu Pro Gly Ala Pro Gly Asp Lys Gly Glu Ala Gly Thr Asn
    50                  55                  60
```

```
Gly Lys Arg Gly Glu Arg Gly Pro Pro Gly Pro Pro Gly Lys Ala Gly
65                  70                  75                  80

Pro Pro Gly Pro Asn Gly Ala Pro Ser Pro Asp Gly Asp Ser Ser Leu
                85                  90                  95

Ala Ala Ser Glu Arg Lys Ala Leu Gln Thr Glu Met Ala Arg Ile Lys
            100                 105                 110

Lys Trp Leu Thr Phe Ser Leu Gly Lys Gln Val Gly Asn Lys Phe Phe
        115                 120                 125

Leu Thr Asn Gly Glu Ile Met Thr Phe Glu Lys Val Lys Ala Leu Cys
    130                 135                 140

Val Lys Phe Gln Ala Ser Val Ala Thr Pro Arg Asn Ala Ala Glu Asn
145                 150                 155                 160

Gly Ala Ile Gln Asn Leu Ile Lys Glu Glu Ala Phe Leu Gly Ile Thr
                165                 170                 175

Asp Glu Lys Thr Glu Gly Gln Phe Val Asp Leu Thr Gly Asn Arg Leu
            180                 185                 190

Thr Tyr Thr Asn Trp Asn Glu Gly Glu Pro Asn Asn Ala Gly Ser Asp
        195                 200                 205

Glu Asp Cys Val Leu Leu Leu Lys Asn Gly Gln Trp Asn Asp Val Pro
    210                 215                 220

Cys Ser Thr Ser His Leu Ala Val Cys Glu Phe Pro Ile
225                 230                 235


<210>  125
<211>  288
<212>  PRT
<213>  Homo sapiens

<400>  125

Leu Gln Ala Ala Asp Thr Cys Pro Glu Val Lys Met Val Gly Leu Glu
1               5                   10                  15

Gly Ser Asp Lys Leu Thr Ile Leu Arg Gly Cys Pro Gly Leu Pro Gly
            20                  25                  30
```

```
Ala Pro Gly Asp Lys Gly Glu Ala Gly Thr Asn Gly Lys Arg Gly Glu
        35                  40                  45

Arg Gly Pro Pro Gly Pro Pro Gly Lys Ala Gly Pro Pro Gly Pro Asn
    50                  55                  60

Gly Ala Pro Gly Glu Pro Gln Pro Cys Leu Thr Gly Pro Arg Thr Cys
65                  70                  75                  80

Lys Asp Leu Leu Asp Arg Gly His Phe Leu Ser Gly Trp His Thr Ile
                85                  90                  95

Tyr Leu Pro Asp Cys Arg Pro Leu Thr Val Leu Cys Asp Met Asp Thr
            100                 105                 110

Asp Gly Gly Gly Trp Thr Val Phe Gln Arg Arg Val Asp Gly Ser Val
        115                 120                 125

Asp Phe Tyr Arg Asp Trp Ala Thr Tyr Lys Gln Gly Phe Gly Ser Arg
    130                 135                 140

Leu Gly Glu Phe Trp Leu Gly Asn Asp Asn Ile His Ala Leu Thr Ala
145                 150                 155                 160

Gln Gly Thr Ser Glu Leu Arg Val Asp Leu Val Asp Phe Glu Asp Asn
                165                 170                 175

Tyr Gln Phe Ala Lys Tyr Arg Ser Phe Lys Val Ala Asp Glu Ala Glu
            180                 185                 190

Lys Tyr Asn Leu Val Leu Gly Ala Phe Val Glu Gly Ser Ala Gly Asp
        195                 200                 205

Ser Leu Thr Phe His Asn Asn Gln Ser Phe Ser Thr Lys Asp Gln Asp
    210                 215                 220

Asn Asp Leu Asn Thr Gly Asn Cys Ala Val Met Phe Gln Gly Ala Trp
225                 230                 235                 240

Trp Tyr Lys Asn Cys His Val Ser Asn Leu Asn Gly Arg Tyr Leu Arg
                245                 250                 255

Gly Thr His Gly Ser Phe Ala Asn Gly Ile Asn Trp Lys Ser Gly Lys
```

260 265 270

Gly Tyr Asn Tyr Ser Tyr Lys Val Ser Glu Met Lys Val Arg Pro Ala
275 280 285

<210> 126
<211> 228
<212> PRT
<213> Homo sapiens

<400> 126

Glu Thr Val Thr Cys Glu Asp Ala Gln Lys Thr Cys Pro Ala Val Ile
1 5 10 15

Ala Cys Ser Ser Pro Gly Ile Asn Gly Phe Pro Gly Lys Asp Gly Arg
20 25 30

Asp Gly Thr Lys Gly Glu Lys Gly Glu Pro Gly Gln Gly Leu Arg Gly
35 40 45

Leu Gln Gly Pro Pro Gly Lys Leu Gly Pro Pro Gly Asn Pro Gly Pro
50 55 60

Ser Gly Ser Pro Gly Pro Lys Gly Gln Lys Gly Asp Pro Gly Lys Ser
65 70 75 80

Pro Asp Gly Asp Ser Ser Leu Ala Ala Ser Glu Arg Lys Ala Leu Gln
85 90 95

Thr Glu Met Ala Arg Ile Lys Lys Trp Leu Thr Phe Ser Leu Gly Lys
100 105 110

Gln Val Gly Asn Lys Phe Phe Leu Thr Asn Gly Glu Ile Met Thr Phe
115 120 125

Glu Lys Val Lys Ala Leu Cys Val Lys Phe Gln Ala Ser Val Ala Thr
130 135 140

Pro Arg Asn Ala Ala Glu Asn Gly Ala Ile Gln Asn Leu Ile Lys Glu
145 150 155 160

Glu Ala Phe Leu Gly Ile Thr Asp Glu Lys Thr Glu Gly Gln Phe Val
165 170 175

```
Asp Leu Thr Gly Asn Arg Leu Thr Tyr Thr Asn Trp Asn Glu Gly Glu
            180                 185                 190

Pro Asn Asn Ala Gly Ser Asp Glu Asp Cys Val Leu Leu Lys Asn
        195                 200                 205

Gly Gln Trp Asn Asp Val Pro Cys Ser Thr Ser His Leu Ala Val Cys
    210                 215                 220

Glu Phe Pro Ile
225
```

<210> 127
<211> 216
<212> PRT
<213> Homo sapiens

<400> 127

```
Leu Gln Ala Ala Asp Thr Cys Pro Glu Val Lys Met Val Gly Leu Glu
1               5                   10                  15

Gly Ser Asp Lys Leu Thr Ile Leu Arg Gly Cys Pro Gly Leu Pro Gly
            20                  25                  30

Ala Pro Gly Asp Lys Gly Glu Ala Gly Thr Asn Gly Lys Arg Gly Glu
        35                  40                  45

Arg Gly Pro Pro Gly Pro Pro Gly Lys Ala Gly Pro Pro Gly Pro Asn
    50                  55                  60

Gly Ala Pro Ser Pro Asp Gly Asp Ser Ser Leu Ala Ala Ser Glu Arg
65                  70                  75                  80

Lys Ala Leu Gln Thr Glu Met Ala Arg Ile Lys Lys Trp Leu Thr Phe
                85                  90                  95

Ser Leu Gly Lys Gln Val Gly Asn Lys Phe Phe Leu Thr Asn Gly Glu
            100                 105                 110

Ile Met Thr Phe Glu Lys Val Lys Ala Leu Cys Val Lys Phe Gln Ala
        115                 120                 125

Ser Val Ala Thr Pro Arg Asn Ala Ala Glu Asn Gly Ala Ile Gln Asn
    130                 135                 140
```

```
Leu Ile Lys Glu Glu Ala Phe Leu Gly Ile Thr Asp Glu Lys Thr Glu
145                 150                 155                 160

Gly Gln Phe Val Asp Leu Thr Gly Asn Arg Leu Thr Tyr Thr Asn Trp
                165                 170                 175

Asn Glu Gly Glu Pro Asn Asn Ala Gly Ser Asp Glu Asp Cys Val Leu
            180                 185                 190

Leu Leu Lys Asn Gly Gln Trp Asn Asp Val Pro Cys Ser Thr Ser His
        195                 200                 205

Leu Ala Val Cys Glu Phe Pro Ile
    210                 215
```

<210> 128
<211> 299
<212> PRT
<213> Homo sapiens

<400> 128

```
Met Asp Leu Leu Trp Ile Leu Pro Ser Leu Trp Leu Leu Leu Leu Gly
1               5                   10                  15

Gly Pro Ala Cys Leu Lys Thr Gln Glu His Pro Ser Cys Pro Gly Pro
            20                  25                  30

Arg Glu Leu Glu Ala Ser Lys Val Val Leu Leu Pro Ser Cys Pro Gly
        35                  40                  45

Ala Pro Gly Ser Pro Gly Glu Lys Gly Ala Pro Gly Pro Gln Gly Pro
    50                  55                  60

Pro Gly Pro Pro Gly Lys Met Gly Pro Lys Gly Glu Pro Gly Asp Pro
65                  70                  75                  80

Val Asn Leu Leu Arg Cys Gln Glu Gly Pro Arg Asn Cys Arg Glu Leu
                85                  90                  95

Leu Ser Gln Gly Ala Thr Leu Ser Gly Trp Tyr His Leu Cys Leu Pro
            100                 105                 110

Glu Gly Arg Ala Leu Pro Val Phe Cys Asp Met Asp Thr Glu Gly Gly
        115                 120                 125
```

```
Gly Trp Leu Val Phe Gln Arg Arg Gln Asp Gly Ser Val Asp Phe Phe
    130                 135                 140

Arg Ser Trp Ser Ser Tyr Arg Ala Gly Phe Gly Asn Gln Glu Ser Glu
145                 150                 155                 160

Phe Trp Leu Gly Asn Glu Asn Leu His Gln Leu Thr Leu Gln Gly Asn
                165                 170                 175

Trp Glu Leu Arg Val Glu Leu Glu Asp Phe Asn Gly Asn Arg Thr Phe
            180                 185                 190

Ala His Tyr Ala Thr Phe Arg Leu Leu Gly Glu Val Asp His Tyr Gln
        195                 200                 205

Leu Ala Leu Gly Lys Phe Ser Glu Gly Thr Ala Gly Asp Ser Leu Ser
    210                 215                 220

Leu His Ser Gly Arg Pro Phe Thr Thr Tyr Asp Ala Asp His Asp Ser
225                 230                 235                 240

Ser Asn Ser Asn Cys Ala Val Ile Val His Gly Ala Trp Trp Tyr Ala
                245                 250                 255

Ser Cys Tyr Arg Ser Asn Leu Asn Gly Arg Tyr Ala Val Ser Asp Ala
            260                 265                 270

Ala Ala His Lys Tyr Gly Ile Asp Trp Ala Ser Gly Arg Gly Val Gly
        275                 280                 285

His Pro Tyr Arg Arg Val Arg Met Met Leu Arg
    290                 295


<210>  129
<211>  169
<212>  PRT
<213>  Homo sapiens

<400>  129

Met Gly Pro Ala Leu Leu Ala Leu Ser Phe Leu Trp Thr Met Ala Leu
1               5                   10                  15

Thr Glu Asp Thr Cys Pro Ala Met Leu Glu Tyr Val Ala Leu Asn Ser
```

```
            20                  25                  30

Glu Pro Gly Met Ala Ser Lys Asn Pro Ser Arg Arg His Gly Leu Ser
        35                  40                  45

Leu Leu Val Val Asp Gln Gly Pro Gly Ala Arg Gly Val Arg Thr Asp
    50                  55                  60

Gln Gly Pro Ser Gly Ala Asp Pro Gly Ser Leu Glu Leu His Gly Glu
65                  70                  75                  80

Cys Pro Ile Phe Pro Ser Glu Gln Val Ile Leu Thr His His Asn Asn
                85                  90                  95

Tyr Pro Phe Ser Thr Glu Asp Gln Asp Asn Asp Arg Asp Ala Glu Asn
            100                 105                 110

Cys Ala Val His Tyr Gln Gly Ala Trp Trp Tyr Ala Ser Cys His Leu
        115                 120                 125

Ser His Leu Asn Gly Val Tyr Leu Gly Gly Ala Arg Asp Ser Phe Thr
    130                 135                 140

Asn Gly Ile Asn Trp Lys Ser Gly Lys Gly Asn Asn Tyr Ser Tyr Lys
145                 150                 155                 160

Val Ser Glu Met Lys Val Arg Pro Thr
                165


<210>  130
<211>  326
<212>  PRT
<213>  Homo sapiens

<400>  130

Met Glu Leu Ser Gly Ala Thr Met Ala Arg Gly Leu Ala Val Leu Leu
1               5                   10                  15

Val Leu Phe Leu His Ile Lys Asn Leu Pro Ala Gln Ala Ala Asp Thr
            20                  25                  30

Cys Pro Glu Val Lys Val Val Gly Leu Glu Gly Ser Asp Lys Leu Thr
        35                  40                  45
```

```
Ile Leu Arg Gly Cys Pro Gly Leu Pro Gly Ala Pro Gly Pro Lys Gly
    50                  55                  60

Glu Ala Gly Val Ile Gly Glu Arg Gly Glu Arg Gly Leu Pro Gly Ala
65                  70                  75                  80

Pro Gly Lys Ala Gly Pro Val Gly Pro Lys Gly Asp Arg Gly Glu Lys
                85                  90                  95

Gly Met Arg Gly Glu Lys Gly Asp Ala Gly Gln Ser Gln Ser Cys Ala
            100                 105                 110

Thr Gly Pro Arg Asn Cys Lys Asp Leu Leu Asp Arg Gly Tyr Phe Leu
        115                 120                 125

Ser Gly Trp His Thr Ile Tyr Leu Pro Asp Cys Arg Pro Leu Thr Val
    130                 135                 140

Leu Cys Asp Met Asp Thr Asp Gly Gly Gly Trp Thr Val Phe Gln Arg
145                 150                 155                 160

Arg Met Asp Gly Ser Val Asp Phe Tyr Arg Asp Trp Ala Ala Tyr Lys
                165                 170                 175

Gln Gly Phe Gly Ser Gln Leu Gly Glu Phe Trp Leu Gly Asn Asp Asn
            180                 185                 190

Ile His Ala Leu Thr Ala Gln Gly Ser Ser Glu Leu Arg Val Asp Leu
        195                 200                 205

Val Asp Phe Glu Gly Asn His Gln Phe Ala Lys Tyr Lys Ser Phe Lys
    210                 215                 220

Val Ala Asp Glu Ala Glu Lys Tyr Lys Leu Val Leu Gly Ala Phe Val
225                 230                 235                 240

Gly Gly Ser Ala Gly Asn Ser Leu Thr Gly His Asn Asn Asn Phe Phe
                245                 250                 255

Ser Thr Lys Asp Gln Asp Asn Asp Val Ser Ser Ser Asn Cys Ala Glu
            260                 265                 270

Lys Phe Gln Gly Ala Trp Trp Tyr Ala Asp Cys His Ala Ser Asn Leu
        275                 280                 285
```

```
Asn Gly Leu Tyr Leu Met Gly Pro His Glu Ser Tyr Ala Asn Gly Ile
    290                 295                 300

Asn Trp Ser Ala Ala Lys Gly Tyr Lys Tyr Ser Tyr Lys Val Ser Glu
305                 310                 315                 320

Met Lys Val Arg Pro Ala
                325
```

<210> 131
<211> 299
<212> PRT
<213> Homo sapiens

<400> 131

```
Met Asp Leu Leu Trp Ile Leu Pro Ser Leu Trp Leu Leu Leu Leu Gly
1               5                   10                  15

Gly Pro Ala Cys Leu Lys Thr Gln Glu His Pro Ser Cys Pro Gly Pro
            20                  25                  30

Arg Glu Leu Glu Ala Ser Lys Val Val Leu Leu Pro Ser Cys Pro Gly
        35                  40                  45

Ala Pro Gly Ser Pro Gly Glu Lys Gly Ala Pro Gly Pro Gln Gly Pro
    50                  55                  60

Pro Gly Pro Pro Gly Lys Met Gly Pro Lys Gly Glu Pro Gly Asp Pro
65                  70                  75                  80

Val Asn Leu Leu Arg Cys Gln Glu Gly Pro Arg Asn Cys Arg Glu Leu
                85                  90                  95

Leu Ser Gln Gly Ala Thr Leu Ser Gly Trp Tyr His Leu Cys Leu Pro
            100                 105                 110

Glu Gly Arg Ala Leu Pro Val Phe Cys Asp Met Asp Thr Glu Gly Gly
        115                 120                 125

Gly Trp Leu Val Phe Gln Arg Arg Gln Asp Gly Ser Val Asp Phe Phe
    130                 135                 140

Arg Ser Trp Ser Ser Tyr Arg Ala Gly Phe Gly Asn Gln Glu Ser Glu
```

```
145                 150                 155                 160

Phe Trp Leu Gly Asn Glu Asn Leu His Gln Leu Thr Leu Gln Gly Asn
                165                 170                 175

Trp Glu Leu Arg Val Glu Leu Glu Asp Phe Asn Gly Asn Arg Thr Phe
            180                 185                 190

Ala His Tyr Ala Thr Phe Arg Leu Leu Gly Glu Val Asp His Tyr Gln
        195                 200                 205

Leu Ala Leu Gly Lys Phe Ser Glu Gly Thr Ala Gly Asp Ser Leu Ser
    210                 215                 220

Leu His Ser Gly Arg Pro Phe Thr Thr Tyr Asp Ala Asp His Asp Ser
225                 230                 235                 240

Ser Asn Ser Asn Cys Ala Val Ile Val His Gly Ala Trp Trp Tyr Ala
                245                 250                 255

Ser Cys Tyr Arg Ser Asn Leu Asn Gly Arg Tyr Ala Val Ser Asp Ala
            260                 265                 270

Ala Ala His Lys Tyr Gly Ile Asp Trp Ala Ser Gly Arg Gly Val Gly
        275                 280                 285

His Pro Tyr Arg Arg Val Arg Met Met Leu Arg
    290                 295
```

<210> 132
<211> 314
<212> PRT
<213> Mus musculus

<400> 132

```
Met Ala Leu Gly Ser Ala Ala Leu Phe Val Leu Thr Leu Thr Val His
1               5                   10                  15

Ala Ala Gly Thr Cys Pro Glu Leu Lys Val Leu Asp Leu Glu Gly Tyr
            20                  25                  30

Lys Gln Leu Thr Ile Leu Gln Gly Cys Pro Gly Leu Pro Gly Ala Ala
        35                  40                  45
```

```
Gly Pro Lys Gly Glu Ala Gly Ala Lys Gly Asp Arg Gly Glu Ser Gly
    50                  55                  60

Leu Pro Gly Ile Pro Gly Lys Glu Gly Pro Thr Gly Pro Lys Gly Asn
65                  70                  75                  80

Gln Gly Glu Lys Gly Ile Arg Gly Glu Lys Gly Asp Ser Gly Pro Ser
                85                  90                  95

Gln Ser Cys Ala Thr Gly Pro Arg Thr Cys Lys Glu Leu Leu Thr Gln
            100                 105                 110

Gly His Phe Leu Thr Gly Trp Tyr Thr Ile Tyr Leu Pro Asp Cys Arg
        115                 120                 125

Pro Leu Thr Val Leu Cys Asp Met Asp Thr Asp Gly Gly Gly Trp Thr
    130                 135                 140

Val Phe Gln Arg Arg Leu Asp Gly Ser Val Asp Phe Phe Arg Asp Trp
145                 150                 155                 160

Thr Ser Tyr Lys Arg Gly Phe Gly Ser Gln Leu Gly Glu Phe Trp Leu
                165                 170                 175

Gly Asn Asp Asn Ile His Ala Leu Thr Thr Gln Gly Thr Ser Glu Leu
            180                 185                 190

Arg Val Asp Leu Ser Asp Phe Glu Gly Lys His Asp Phe Ala Lys Tyr
        195                 200                 205

Ser Ser Phe Gln Ile Gln Gly Glu Ala Glu Lys Tyr Lys Leu Ile Leu
    210                 215                 220

Gly Asn Phe Leu Gly Gly Gly Ala Gly Asp Ser Leu Thr Pro His Asn
225                 230                 235                 240

Asn Arg Leu Phe Ser Thr Lys Asp Gln Asp Asn Asp Gly Ser Thr Ser
                245                 250                 255

Ser Cys Ala Met Gly Tyr His Gly Ala Trp Trp Tyr Ser Gln Cys His
            260                 265                 270

Thr Ser Asn Leu Asn Gly Leu Tyr Leu Arg Gly Pro His Lys Ser Tyr
        275                 280                 285
```

```
Ala Asn Gly Val Asn Trp Lys Ser Trp Arg Gly Tyr Asn Tyr Ser Cys
    290                 295                 300

Lys Val Ser Glu Met Lys Val Arg Leu Ile
305                 310
```

<210> 133
<211> 102
<212> PRT
<213> Homo sapiens

<400> 133

```
Met Glu Leu Asp Arg Ala Val Gly Val Leu Gly Ala Ala Thr Leu Leu
1               5                   10                  15

Leu Ser Phe Leu Gly Met Ala Trp Ala Leu Gln Ala Ala Asp Thr Cys
            20                  25                  30

Pro Glu Val Lys Met Val Gly Leu Glu Gly Ser Asp Lys Leu Thr Ile
        35                  40                  45

Leu Arg Gly Cys Pro Gly Leu Pro Gly Ala Pro Gly Asp Lys Gly Glu
    50                  55                  60

Ala Gly Thr Asn Gly Lys Arg Gly Glu Arg Gly Pro Pro Gly Pro Pro
65                  70                  75                  80

Gly Lys Ala Gly Pro Pro Gly Pro Asn Gly Ala Pro Gly Glu Pro Gln
                85                  90                  95

Pro Cys Leu Thr Gly Asp
            100
```

<210> 134
<211> 182
<212> PRT
<213> Homo sapiens

<400> 134

```
Met Glu Leu Asp Arg Ala Val Gly Val Leu Gly Ala Ala Thr Leu Leu
1               5                   10                  15

Leu Ser Phe Leu Gly Met Ala Trp Ala Leu Gln Ala Ala Asp Thr Cys
            20                  25                  30
```

```
Pro Glu Val Lys Met Val Gly Leu Glu Gly Ser Asp Lys Leu Thr Ile
        35                  40                  45

Leu Arg Gly Cys Pro Gly Leu Pro Gly Ala Pro Gly Asp Lys Gly Glu
    50                  55                  60

Ala Gly Thr Asn Gly Lys Arg Gly Glu Arg Gly Pro Pro Gly Pro Pro
65                  70                  75                  80

Gly Lys Ala Gly Pro Pro Gly Pro Asn Gly Ala Pro Gly Glu Pro Gln
                85                  90                  95

Pro Cys Leu Thr Gly Pro Arg Thr Cys Lys Asp Leu Leu Asp Arg Gly
            100                 105                 110

His Phe Leu Ser Gly Trp His Thr Ile Tyr Leu Pro Asp Cys Arg Pro
        115                 120                 125

Leu Thr Val Leu Cys Asp Met Asp Thr Asp Gly Gly Gly Trp Thr Val
    130                 135                 140

Ser Val Gly Leu Gly Arg Gly Gly Gln Pro Gly Ser Pro Gly Gly Gln
145                 150                 155                 160

Ala Ala His Leu Val Gly Glu His Thr Leu Glu Phe Ser Ile Leu Leu
                165                 170                 175

Val Gly Asp Ser Gln Arg
            180


<210>  135
<211>  275
<212>  PRT
<213>  Homo sapiens

<400>  135

Met Glu Leu Asp Arg Ala Val Gly Val Leu Gly Ala Ala Thr Leu Leu
1               5                   10                  15

Leu Ser Phe Leu Gly Met Ala Trp Ala Leu Gln Ala Ala Asp Thr Cys
            20                  25                  30

Pro Gly Glu Arg Gly Pro Pro Gly Pro Pro Gly Lys Ala Gly Pro Pro
```

```
        35                  40                  45

Gly Pro Asn Gly Ala Pro Gly Glu Pro Gln Pro Cys Leu Thr Gly Pro
    50                  55                  60

Arg Thr Cys Lys Asp Leu Leu Asp Arg Gly His Phe Leu Ser Gly Trp
65                  70                  75                  80

His Thr Ile Tyr Leu Pro Asp Cys Arg Pro Leu Thr Val Leu Cys Asp
                85                  90                  95

Met Asp Thr Asp Gly Gly Gly Trp Thr Val Phe Gln Arg Arg Val Asp
            100                 105                 110

Gly Ser Val Asp Phe Tyr Arg Asp Trp Ala Thr Tyr Lys Gln Gly Phe
        115                 120                 125

Gly Ser Arg Leu Gly Glu Phe Trp Leu Gly Asn Asp Asn Ile His Ala
    130                 135                 140

Leu Thr Ala Gln Gly Thr Ser Glu Leu Arg Val Asp Leu Val Asp Phe
145                 150                 155                 160

Glu Asp Asn Tyr Gln Phe Ala Lys Tyr Arg Ser Phe Lys Val Ala Asp
                165                 170                 175

Glu Ala Glu Lys Tyr Asn Leu Val Leu Gly Ala Phe Val Glu Gly Ser
            180                 185                 190

Ala Gly Asp Ser Leu Thr Phe His Asn Asn Gln Ser Phe Ser Thr Lys
        195                 200                 205

Asp Gln Asp Asn Asp Leu Asn Thr Gly Asn Cys Ala Val Met Phe Gln
    210                 215                 220

Gly Ala Trp Trp Tyr Lys Asn Cys His Val Ser Asn Leu Asn Gly Arg
225                 230                 235                 240

Tyr Leu Arg Gly Thr His Gly Ser Phe Ala Asn Gly Ile Asn Trp Lys
                245                 250                 255

Ser Gly Lys Gly Tyr Asn Tyr Ser Tyr Lys Val Ser Glu Met Lys Val
            260                 265                 270
```

Arg Pro Ala
275

<210> 136
<211> 326
<212> PRT
<213> Homo Sapiens

<400> 136

Met Glu Leu Ser Gly Ala Thr Met Ala Arg Gly Leu Ala Val Leu Leu
1 5 10 15

Val Leu Phe Leu His Ile Lys Asn Leu Pro Ala Gln Ala Ala Asp Thr
20 25 30

Cys Pro Glu Val Lys Val Val Gly Leu Glu Gly Ser Asp Lys Leu Thr
35 40 45

Ile Leu Arg Gly Cys Pro Gly Leu Pro Gly Ala Pro Gly Pro Lys Gly
50 55 60

Glu Ala Gly Val Ile Gly Glu Arg Gly Glu Arg Gly Leu Pro Gly Ala
65 70 75 80

Pro Gly Lys Ala Gly Pro Val Gly Pro Lys Gly Asp Arg Gly Glu Lys
85 90 95

Gly Met Arg Gly Glu Lys Gly Asp Ala Gly Gln Ser Gln Ser Cys Ala
100 105 110

Thr Gly Pro Arg Asn Cys Lys Asp Leu Leu Asp Arg Gly Tyr Phe Leu
115 120 125

Ser Gly Trp His Thr Ile Tyr Leu Pro Asp Cys Arg Pro Leu Thr Val
130 135 140

Leu Cys Asp Met Asp Thr Asp Gly Gly Gly Trp Thr Val Phe Gln Arg
145 150 155 160

Arg Met Asp Gly Ser Val Asp Phe Tyr Arg Asp Trp Ala Ala Tyr Lys
165 170 175

Gln Gly Phe Gly Ser Gln Leu Gly Glu Phe Trp Leu Gly Asn Asp Asn
180 185 190

```
Ile His Ala Leu Thr Ala Gln Gly Ser Ser Glu Leu Arg Val Asp Leu
        195                 200                 205

Val Asp Phe Glu Gly Asn His Gln Phe Ala Lys Tyr Lys Ser Phe Lys
    210                 215                 220

Val Ala Asp Glu Ala Glu Lys Tyr Lys Leu Val Leu Gly Ala Phe Val
225                 230                 235                 240

Gly Gly Ser Ala Gly Asn Ser Leu Thr Gly His Asn Asn Asn Phe Phe
                245                 250                 255

Ser Thr Lys Asp Gln Asp Asn Asp Val Ser Ser Ser Asn Cys Ala Glu
            260                 265                 270

Lys Phe Gln Gly Ala Trp Trp Tyr Ala Asp Cys His Ala Ser Asn Leu
        275                 280                 285

Asn Gly Leu Tyr Leu Met Gly Pro His Glu Ser Tyr Ala Asn Gly Ile
    290                 295                 300

Asn Trp Ser Ala Ala Lys Gly Tyr Lys Tyr Ser Tyr Lys Val Ser Glu
305                 310                 315                 320

Met Lys Val Arg Pro Ala
                325
```

<210> 137
<211> 313
<212> PRT
<213> Homo sapiens

<400> 137

```
Met Glu Leu Asp Arg Ala Val Gly Val Leu Gly Ala Ala Thr Leu Leu
1               5                   10                  15

Leu Ser Phe Leu Gly Met Ala Trp Ala Leu Gln Ala Ala Asp Thr Cys
            20                  25                  30

Pro Glu Val Lys Met Val Gly Leu Glu Gly Ser Asp Lys Leu Thr Ile
        35                  40                  45

Leu Arg Gly Cys Pro Gly Leu Pro Gly Ala Pro Gly Asp Lys Gly Glu
```

```
    50                  55                  60

Ala Gly Thr Asn Gly Lys Arg Gly Glu Arg Gly Pro Pro Gly Pro Pro
65                  70                  75                  80

Gly Lys Ala Gly Pro Pro Gly Pro Asn Gly Ala Pro Gly Glu Pro Gln
                85                  90                  95

Pro Cys Leu Thr Gly Pro Arg Thr Cys Lys Asp Leu Leu Asp Arg Gly
            100                 105                 110

His Phe Leu Ser Gly Trp His Thr Ile Tyr Leu Pro Asp Cys Arg Pro
        115                 120                 125

Leu Thr Val Leu Cys Asp Met Asp Thr Asp Gly Gly Gly Trp Thr Val
    130                 135                 140

Phe Gln Arg Arg Val Asp Gly Ser Val Asp Phe Tyr Arg Asp Trp Ala
145                 150                 155                 160

Thr Tyr Lys Gln Gly Phe Gly Ser Arg Leu Gly Glu Phe Trp Leu Gly
                165                 170                 175

Asn Asp Asn Ile His Ala Leu Thr Ala Gln Gly Thr Ser Glu Leu Arg
            180                 185                 190

Val Asp Leu Val Asp Phe Glu Asp Asn Tyr Gln Phe Ala Lys Tyr Arg
        195                 200                 205

Ser Phe Lys Val Ala Asp Glu Ala Glu Lys Tyr Asn Leu Val Leu Gly
    210                 215                 220

Ala Phe Val Glu Gly Ser Ala Gly Asp Ser Leu Thr Phe His Asn Asn
225                 230                 235                 240

Gln Ser Phe Ser Thr Lys Asp Gln Asp Asn Asp Leu Asn Thr Gly Asn
                245                 250                 255

Cys Ala Val Met Phe Gln Gly Ala Trp Trp Tyr Lys Asn Cys His Val
            260                 265                 270

Ser Asn Leu Asn Gly Arg Tyr Leu Arg Gly Thr His Gly Ser Phe Ala
        275                 280                 285
```

```
Asn Gly Ile Asn Trp Lys Ser Gly Lys Gly Tyr Asn Tyr Ser Tyr Lys
    290                 295                 300

Val Ser Glu Met Lys Val Arg Pro Ala
305                 310
```

<210> 138
<211> 335
<212> PRT
<213> Homo sapiens

<400> 138

```
Met Trp Trp Pro Met Leu Trp Ala Phe Pro Val Leu Leu Cys Leu Cys
1               5                   10                  15

Ser Ser Gln Ala Leu Gly Gln Glu Ser Gly Ala Cys Pro Asp Val Lys
            20                  25                  30

Ile Val Gly Leu Gly Ala Gln Asp Lys Val Ala Val Ile Gln Ser Cys
        35                  40                  45

Pro Ser Phe Pro Gly Pro Pro Gly Pro Lys Gly Glu Pro Gly Ser Pro
    50                  55                  60

Ala Gly Arg Gly Glu Arg Gly Leu Gln Gly Ser Pro Gly Lys Met Gly
65                  70                  75                  80

Pro Pro Gly Ser Lys Gly Glu Pro Gly Thr Met Gly Pro Pro Gly Val
                85                  90                  95

Lys Gly Glu Lys Gly Glu Arg Gly Thr Ala Ser Pro Leu Gly Gln Lys
            100                 105                 110

Glu Leu Gly Asp Ala Leu Cys Arg Arg Gly Pro Arg Ser Cys Lys Asp
        115                 120                 125

Leu Leu Thr Arg Gly Ile Phe Leu Thr Gly Trp Tyr Thr Ile Tyr Leu
    130                 135                 140

Pro Asp Cys Arg Pro Leu Thr Val Leu Cys Asp Met Asp Val Asp Gly
145                 150                 155                 160

Gly Gly Trp Thr Val Phe Gln Arg Arg Val Asp Gly Ser Ile Asn Phe
                165                 170                 175
```

```
Tyr Arg Asp Trp Asp Ser Tyr Lys Arg Gly Phe Gly Asn Leu Gly Thr
            180                 185                 190

Glu Phe Trp Leu Gly Asn Asp Tyr Leu His Leu Leu Thr Ala Asn Gly
        195                 200                 205

Asn Gln Glu Leu Arg Val Asp Leu Arg Glu Phe Gln Gly Gln Thr Ser
    210                 215                 220

Phe Ala Lys Tyr Ser Ser Phe Gln Val Ser Gly Glu Gln Glu Lys Tyr
225                 230                 235                 240

Lys Leu Thr Leu Gly Gln Phe Leu Glu Gly Thr Ala Gly Asp Ser Leu
                245                 250                 255

Thr Lys His Asn Asn Met Ala Phe Ser Thr His Asp Gln Asp Asn Asp
            260                 265                 270

Thr Asn Gly Gly Lys Asn Cys Ala Ala Leu Phe His Gly Ala Trp Trp
        275                 280                 285

Tyr His Asp Cys His Gln Ser Asn Leu Asn Gly Arg Tyr Leu Pro Gly
    290                 295                 300

Ser His Glu Ser Tyr Ala Asp Gly Ile Asn Trp Leu Ser Gly Arg Gly
305                 310                 315                 320

His Arg Tyr Ser Tyr Lys Val Ala Glu Met Lys Ile Arg Ala Ser
                325                 330                 335


<210>  139
<211>  313
<212>  PRT
<213>  Homo sapiens

<400>  139

Met Glu Leu Asp Arg Ala Val Gly Val Leu Gly Ala Ala Thr Leu Leu
1               5                   10                  15

Leu Ser Phe Leu Gly Met Ala Trp Ala Leu Gln Ala Ala Asp Thr Cys
            20                  25                  30

Pro Glu Val Lys Met Val Gly Leu Glu Gly Ser Asp Lys Leu Thr Ile
```

```
        35                  40                  45

Leu Arg Gly Cys Pro Gly Leu Pro Gly Ala Pro Gly Asp Lys Gly Glu
    50                  55                  60

Ala Gly Thr Asn Gly Lys Arg Gly Glu Arg Gly Pro Pro Gly Pro Pro
65                  70                  75                  80

Gly Lys Ala Gly Pro Pro Gly Pro Asn Gly Ala Pro Gly Glu Pro Gln
                85                  90                  95

Pro Cys Leu Thr Gly Pro Arg Thr Cys Lys Asp Leu Leu Asp Arg Gly
            100                 105                 110

His Phe Leu Ser Gly Trp His Thr Ile Tyr Leu Pro Asp Cys Arg Pro
        115                 120                 125

Leu Thr Val Leu Cys Asp Met Asp Thr Asp Gly Gly Gly Trp Thr Val
    130                 135                 140

Phe Gln Arg Arg Val Asp Gly Ser Val Asp Phe Tyr Arg Asp Trp Ala
145                 150                 155                 160

Thr Tyr Lys Gln Gly Phe Gly Ser Arg Leu Gly Glu Phe Trp Leu Gly
                165                 170                 175

Asn Asp Asn Ile His Ala Leu Thr Ala Gln Gly Thr Ser Glu Leu Arg
            180                 185                 190

Val Asp Leu Val Asp Phe Glu Asp Asn Tyr Gln Phe Ala Lys Tyr Arg
        195                 200                 205

Ser Phe Lys Val Ala Asp Glu Ala Glu Lys Tyr Asn Leu Val Leu Gly
    210                 215                 220

Ala Phe Val Glu Gly Ser Ala Gly Asp Ser Leu Thr Phe His Asn Asn
225                 230                 235                 240

Gln Ser Phe Ser Thr Lys Asp Gln Asp Asn Asp Leu Asn Thr Gly Asn
                245                 250                 255

Cys Ala Val Met Phe Gln Gly Ala Trp Trp Tyr Lys Asn Cys His Val
            260                 265                 270
```

```
Ser Asn Leu Asn Gly Arg Tyr Leu Arg Gly Thr His Gly Ser Phe Ala
        275                 280                 285

Asn Gly Ile Asn Trp Lys Ser Gly Lys Gly Tyr Asn Tyr Ser Tyr Lys
    290                 295                 300

Val Ser Glu Met Lys Val Arg Pro Ala
305                 310
```

<210> 140
<211> 306
<212> PRT
<213> Homo sapiens

<400> 140

```
Leu Gly Ser Ala Ala Leu Phe Val Leu Thr Leu Thr Val His Ala Ala
1               5                   10                  15

Gly Thr Cys Pro Glu Leu Lys Val Leu Asp Leu Glu Gly Tyr Lys Gln
            20                  25                  30

Leu Thr Ile Leu Gln Gly Cys Pro Gly Leu Pro Gly Ala Ala Gly Pro
        35                  40                  45

Lys Gly Glu Ala Gly Ala Lys Gly Asp Arg Gly Glu Ser Gly Leu Pro
    50                  55                  60

Gly Ile Pro Gly Lys Glu Gly Pro Thr Gly Pro Lys Gly Asn Gln Gly
65                  70                  75                  80

Glu Lys Gly Ile Arg Gly Glu Lys Gly Asp Ser Gly Pro Ser Gln Ser
                85                  90                  95

Cys Ala Thr Gly Pro Arg Thr Cys Lys Glu Leu Leu Thr Gln Gly His
            100                 105                 110

Phe Leu Thr Gly Trp Tyr Thr Ile Tyr Leu Pro Asp Cys Arg Pro Met
        115                 120                 125

Thr Val Leu Cys Asp Met Asp Thr Asp Gly Gly Gly Trp Thr Val Phe
    130                 135                 140

Gln Arg Arg Leu Asp Gly Ser Val Asp Phe Phe Arg Asp Trp Thr Ser
145                 150                 155                 160
```

```
Tyr Lys Arg Gly Phe Gly Ser Gln Leu Gly Glu Phe Trp Leu Gly Asn
                165                 170                 175

Asp Asn Ile His Ala Leu Thr Thr Gln Gly Thr Ser Glu Leu Arg Val
            180                 185                 190

Asp Leu Ser Asp Phe Glu Gly Lys His Asp Phe Ala Lys Tyr Ser Ser
        195                 200                 205

Phe Gln Ile Gln Gly Glu Ala Glu Lys Tyr Lys Leu Ile Leu Gly Asn
    210                 215                 220

Phe Leu Gly Gly Gly Ala Gly Asp Ser Leu Thr Pro His Asn Asn Arg
225                 230                 235                 240

Leu Phe Ser Thr Lys Asp Gln Asp Asn Asp Gly Ser Thr Ser Ser Cys
                245                 250                 255

Ala Met Gly Tyr His Gly Ala Trp Trp Tyr Ser Gln Cys His Thr Ser
            260                 265                 270

Asn Leu Asn Gly Leu Tyr Leu Arg Gly Pro His Lys Ser Tyr Ala Asn
        275                 280                 285

Gly Val Asn Trp Lys Ser Trp Arg Gly Tyr Asn Tyr Ser Cys Lys Val
    290                 295                 300

Ser Glu
305


<210>  141
<211>  334
<212>  PRT
<213>  Homo sapiens

<400>  141

Met Gln Trp Pro Thr Leu Trp Ala Phe Ser Gly Leu Leu Cys Leu Cys
1               5                   10                  15

Pro Ser Gln Ala Leu Gly Gln Glu Arg Gly Ala Cys Pro Asp Val Lys
            20                  25                  30

Val Val Gly Leu Gly Ala Gln Asp Lys Val Val Val Ile Gln Ser Cys
```

```
        35                  40                  45

Pro Gly Phe Pro Gly Pro Pro Gly Pro Lys Gly Glu Pro Gly Ser Pro
    50                  55                  60

Ala Gly Arg Gly Glu Arg Gly Phe Gln Gly Ser Pro Gly Lys Met Gly
65                  70                  75                  80

Pro Ala Gly Ser Lys Gly Glu Pro Gly Thr Met Gly Pro Pro Gly Val
                85                  90                  95

Lys Gly Glu Lys Gly Asp Thr Gly Ala Ala Pro Ser Leu Gly Glu Lys
            100                 105                 110

Glu Leu Gly Asp Thr Leu Cys Gln Arg Gly Pro Arg Ser Cys Lys Asp
        115                 120                 125

Leu Leu Thr Arg Gly Ile Phe Leu Thr Gly Trp Tyr Thr Ile His Leu
    130                 135                 140

Pro Asp Cys Arg Pro Leu Thr Val Leu Cys Asp Met Asp Val Asp Gly
145                 150                 155                 160

Gly Gly Trp Thr Val Phe Gln Arg Arg Val Asp Gly Ser Ile Asp Phe
                165                 170                 175

Phe Arg Asp Trp Asp Ser Tyr Lys Arg Gly Phe Gly Asn Leu Gly Thr
            180                 185                 190

Glu Phe Trp Leu Gly Asn Asp Tyr Leu His Leu Leu Thr Ala Asn Gly
        195                 200                 205

Asn Gln Glu Leu Arg Val Asp Leu Gln Asp Phe Gln Gly Lys Gly Ser
    210                 215                 220

Tyr Ala Lys Tyr Ser Ser Phe Gln Val Ser Glu Glu Gln Glu Lys Tyr
225                 230                 235                 240

Lys Leu Thr Leu Gly Gln Phe Leu Glu Gly Thr Ala Gly Asp Ser Leu
                245                 250                 255

Thr Lys His Asn Asn Met Ser Phe Thr Thr His Asp Gln Asp Asn Asp
            260                 265                 270
```

```
Ala Asn Ser Met Asn Cys Ala Ala Leu Phe His Gly Ala Trp Trp Tyr
        275                 280                 285

His Asn Cys His Gln Ser Asn Leu Asn Gly Arg Tyr Leu Ser Gly Ser
    290                 295                 300

His Glu Ser Tyr Ala Asp Gly Ile Asn Trp Gly Thr Gly Gln Gly His
305                 310                 315                 320

His Tyr Ser Tyr Lys Val Ala Glu Met Lys Ile Arg Ala Ser
                325                 330
```

<210> 142
<211> 319
<212> PRT
<213> Homo sapiens

<400> 142

```
Met Val Leu Gly Ser Ala Ala Leu Phe Val Leu Ser Leu Cys Val Thr
1               5                   10                  15

Glu Leu Thr Leu His Ala Ala Asp Thr Cys Pro Glu Val Lys Val Leu
            20                  25                  30

Asp Leu Glu Gly Ser Asn Lys Leu Thr Ile Leu Gln Gly Cys Pro Gly
        35                  40                  45

Leu Pro Gly Ala Leu Gly Pro Lys Gly Glu Ala Gly Ala Lys Gly Asp
    50                  55                  60

Arg Gly Glu Ser Gly Leu Pro Gly His Pro Gly Lys Ala Gly Pro Thr
65                  70                  75                  80

Gly Pro Lys Gly Asp Arg Gly Glu Lys Gly Val Arg Gly Glu Lys Gly
                85                  90                  95

Asp Thr Gly Pro Ser Gln Ser Cys Ala Thr Gly Pro Arg Thr Cys Lys
            100                 105                 110

Glu Leu Leu Thr Arg Gly Tyr Phe Leu Thr Gly Trp Tyr Thr Ile Tyr
        115                 120                 125

Leu Pro Asp Cys Arg Pro Leu Thr Val Leu Cys Asp Met Asp Thr Asp
    130                 135                 140
```

```
Gly Gly Gly Trp Thr Val Phe Gln Arg Arg Ile Asp Gly Thr Val Asp
145                 150                 155                 160

Phe Phe Arg Asp Trp Thr Ser Tyr Lys Gln Gly Phe Gly Ser Gln Leu
                165                 170                 175

Gly Glu Phe Trp Leu Gly Asn Asp Asn Ile His Ala Leu Thr Thr Gln
            180                 185                 190

Gly Thr Asn Glu Leu Arg Val Asp Leu Ala Asp Phe Asp Gly Asn His
        195                 200                 205

Asp Phe Ala Lys Tyr Ser Ser Phe Gln Ile Gln Gly Glu Ala Glu Lys
    210                 215                 220

Tyr Lys Leu Ile Leu Gly Asn Phe Leu Gly Gly Gly Ala Gly Asp Ser
225                 230                 235                 240

Leu Thr Ser Gln Asn Asn Met Leu Phe Ser Thr Lys Asp Gln Asp Asn
                245                 250                 255

Asp Gln Gly Ser Ser Asn Cys Ala Val Arg Tyr His Gly Ala Trp Trp
            260                 265                 270

Tyr Ser Asp Cys His Thr Ser Asn Leu Asn Gly Leu Tyr Leu Arg Gly
        275                 280                 285

Leu His Lys Ser Tyr Ala Asn Gly Val Asn Trp Lys Ser Trp Lys Gly
    290                 295                 300

Tyr Asn Tyr Ser Tyr Lys Val Ser Glu Met Lys Val Arg Leu Ile
305                 310                 315


<210>  143
<211>  334
<212>  PRT
<213>  Mus musculus

<400>  143

Met Gln Trp Pro Thr Leu Trp Ala Phe Ser Gly Leu Leu Cys Leu Cys
1               5                   10                  15

Pro Ser Gln Ala Leu Gly Gln Glu Arg Gly Ala Cys Pro Asp Val Lys
```

```
            20                  25                  30

Val Val Gly Leu Gly Ala Gln Asp Lys Val Val Val Ile Gln Ser Cys
        35                  40                  45

Pro Gly Phe Pro Gly Pro Pro Gly Pro Lys Gly Glu Pro Gly Ser Pro
    50                  55                  60

Ala Gly Arg Gly Glu Arg Gly Phe Gln Gly Ser Pro Gly Lys Met Gly
65                  70                  75                  80

Pro Ala Gly Ser Lys Gly Glu Pro Gly Thr Met Gly Pro Pro Gly Val
                85                  90                  95

Lys Gly Glu Lys Gly Asp Thr Gly Ala Ala Pro Ser Leu Gly Glu Lys
            100                 105                 110

Glu Leu Gly Asp Thr Leu Cys Gln Arg Gly Pro Arg Ser Cys Lys Asp
        115                 120                 125

Leu Leu Thr Arg Gly Ile Phe Leu Thr Gly Trp Tyr Thr Ile His Leu
    130                 135                 140

Pro Asp Cys Arg Pro Leu Thr Val Leu Cys Asp Met Asp Val Asp Gly
145                 150                 155                 160

Gly Gly Trp Thr Val Phe Gln Arg Arg Val Asp Gly Ser Ile Asp Phe
                165                 170                 175

Phe Arg Asp Trp Asp Ser Tyr Lys Arg Gly Phe Gly Asn Leu Gly Thr
            180                 185                 190

Glu Phe Trp Leu Gly Asn Asp Tyr Leu His Leu Leu Thr Ala Asn Gly
        195                 200                 205

Asn Gln Glu Leu Arg Val Asp Leu Gln Asp Phe Gln Gly Lys Gly Ser
    210                 215                 220

Tyr Ala Lys Tyr Ser Ser Phe Gln Val Ser Glu Glu Gln Glu Lys Tyr
225                 230                 235                 240

Lys Leu Thr Leu Gly Gln Phe Leu Glu Gly Thr Ala Gly Asp Ser Leu
                245                 250                 255
```

```
Thr Lys His Asn Asn Met Ser Phe Thr Thr His Asp Gln Asp Asn Asp
            260                 265                 270

Ala Asn Ser Met Asn Cys Ala Ala Leu Phe His Gly Ala Trp Trp Tyr
        275                 280                 285

His Asn Cys His Gln Ser Asn Leu Asn Gly Arg Tyr Leu Ser Gly Ser
    290                 295                 300

His Glu Ser Tyr Ala Asp Gly Ile Asn Trp Gly Thr Gly Gln Gly His
305                 310                 315                 320

His Tyr Ser Tyr Lys Val Ala Glu Met Lys Ile Arg Ala Ser
                325                 330
```

<210> 144
<211> 326
<212> PRT
<213> Homo sapiens

<400> 144

```
Met Glu Leu Ser Gly Ala Thr Met Ala Arg Gly Leu Ala Val Leu Leu
1               5                   10                  15

Val Leu Phe Leu His Ile Lys Asn Leu Pro Ala Gln Ala Ala Asp Thr
            20                  25                  30

Cys Pro Glu Val Lys Val Val Gly Leu Glu Gly Ser Asp Lys Leu Thr
        35                  40                  45

Ile Leu Arg Gly Cys Pro Gly Leu Pro Gly Ala Pro Gly Pro Lys Gly
    50                  55                  60

Glu Ala Gly Val Ile Gly Glu Arg Gly Glu Arg Gly Leu Pro Gly Ala
65                  70                  75                  80

Pro Gly Lys Ala Gly Pro Val Gly Pro Lys Gly Asp Arg Gly Glu Lys
                85                  90                  95

Gly Met Arg Gly Glu Lys Gly Asp Ala Gly Gln Ser Gln Ser Cys Ala
            100                 105                 110

Thr Gly Pro Arg Asn Cys Lys Asp Leu Leu Asp Arg Gly Tyr Phe Leu
        115                 120                 125
```

```
Ser Gly Trp His Asn Ile Tyr Leu Pro Asp Cys Arg Pro Leu Thr Val
    130                 135                 140

Leu Cys Asp Met Asp Thr Asp Gly Gly Gly Trp Thr Val Phe Gln Arg
145                 150                 155                 160

Arg Met Asp Gly Ser Val Asp Phe Tyr Arg Asp Trp Ala Ala Tyr Lys
                165                 170                 175

Gln Gly Phe Gly Ser Gln Leu Gly Glu Phe Trp Leu Gly Asn Asp Asn
            180                 185                 190

Ile His Ala Leu Thr Ala Gln Gly Ser Ser Glu Leu Arg Val Asp Leu
        195                 200                 205

Val Asp Phe Glu Gly Asn His Gln Phe Ala Lys Tyr Lys Ser Phe Lys
    210                 215                 220

Val Ala Asp Glu Ala Glu Lys Tyr Lys Leu Val Leu Gly Ala Phe Val
225                 230                 235                 240

Gly Gly Ser Ala Gly Asn Ser Leu Thr Gly His Asn Asn Asn Phe Phe
                245                 250                 255

Ser Thr Lys Asp Gln Asp Asn Asp Val Ser Ser Ser Asn Cys Ala Glu
            260                 265                 270

Lys Phe Gln Gly Ala Trp Trp Tyr Ala Asp Cys His Ala Ser Ser Leu
        275                 280                 285

Asn Gly Leu Tyr Leu Met Gly Pro His Glu Ser Tyr Ala Asn Gly Ile
    290                 295                 300

Asn Trp Ser Ala Ala Lys Gly Tyr Lys Tyr Ser Tyr Lys Val Ser Glu
305                 310                 315                 320

Met Lys Val Arg Pro Ala
                325
```

<210> 145
<211> 323
<212> PRT
<213> Pig

<400> 145

```
Met Asp Thr Arg Gly Val Ala Ala Ala Met Arg Pro Leu Val Leu Leu
1               5                  10                  15

Val Ala Phe Leu Cys Thr Ala Ala Pro Ala Leu Asp Thr Cys Pro Glu
            20                  25                  30

Val Lys Val Val Gly Leu Glu Gly Ser Asp Lys Leu Ser Ile Leu Arg
        35                  40                  45

Gly Cys Pro Gly Leu Pro Gly Ala Ala Gly Pro Lys Gly Glu Ala Gly
    50                  55                  60

Ala Ser Gly Pro Lys Gly Gly Gln Gly Pro Pro Gly Ala Pro Gly Glu
65                  70                  75                  80

Pro Gly Pro Pro Gly Pro Lys Gly Asp Arg Gly Glu Lys Gly Glu Pro
                85                  90                  95

Gly Pro Lys Gly Glu Ser Trp Glu Thr Glu Gln Cys Leu Thr Gly Pro
            100                 105                 110

Arg Thr Cys Lys Glu Leu Leu Thr Arg Gly His Ile Leu Ser Gly Trp
        115                 120                 125

His Thr Ile Tyr Leu Pro Asp Cys Gln Pro Leu Thr Val Leu Cys Asp
    130                 135                 140

Met Asp Thr Asp Gly Gly Gly Trp Thr Val Phe Gln Arg Arg Ser Asp
145                 150                 155                 160

Gly Ser Val Asp Phe Tyr Arg Asp Trp Ala Ala Tyr Lys Arg Gly Phe
                165                 170                 175

Gly Ser Gln Leu Gly Glu Phe Trp Leu Gly Asn Asp His Ile His Ala
            180                 185                 190

Leu Thr Ala Gln Gly Thr Asn Glu Leu Arg Val Asp Leu Val Asp Phe
        195                 200                 205

Glu Gly Asn His Gln Phe Ala Lys Tyr Arg Ser Phe Gln Val Ala Asp
    210                 215                 220
```

```
Glu Ala Glu Lys Tyr Met Leu Val Leu Gly Ala Phe Val Glu Gly Asn
225                 230                 235                 240

Ala Gly Asp Ser Leu Thr Ser His Asn Asn Ser Leu Phe Thr Thr Lys
                245                 250                 255

Asp Gln Asp Asn Asp Gln Tyr Ala Ser Asn Cys Ala Val Leu Tyr Gln
            260                 265                 270

Gly Ala Trp Trp Tyr Asn Ser Cys His Val Ser Asn Leu Asn Gly Arg
        275                 280                 285

Tyr Leu Gly Gly Ser His Gly Ser Phe Ala Asn Gly Val Asn Trp Ser
    290                 295                 300

Ser Gly Lys Gly Tyr Asn Tyr Ser Tyr Lys Val Ser Glu Met Lys Phe
305                 310                 315                 320

Arg Ala Thr
```

<210> 146
<211> 319
<212> PRT
<213> Homo sapiens

<400> 146

```
Met Ala Arg Gly Leu Ala Val Leu Leu Val Leu Phe Leu His Ile Lys
1               5                   10                  15

Asn Leu Pro Ala Gln Ala Ala Asp Thr Cys Pro Glu Val Lys Val Val
            20                  25                  30

Gly Leu Glu Gly Ser Asp Lys Leu Thr Ile Leu Arg Gly Cys Pro Gly
        35                  40                  45

Leu Pro Gly Ala Pro Gly Pro Lys Gly Glu Ala Gly Val Ile Gly Glu
    50                  55                  60

Arg Gly Glu Arg Gly Leu Pro Gly Ala Pro Gly Lys Ala Gly Pro Val
65                  70                  75                  80

Gly Pro Lys Gly Asp Arg Gly Glu Lys Gly Met Arg Gly Glu Lys Gly
                85                  90                  95
```

```
Asp Ala Gly Gln Ser Gln Ser Cys Ala Thr Gly Pro Arg Asn Cys Lys
            100                 105                 110

Asp Leu Leu Asp Arg Gly Tyr Phe Leu Ser Gly Trp His Thr Ile Tyr
        115                 120                 125

Leu Pro Asp Cys Arg Pro Leu Thr Val Leu Cys Asp Met Asp Thr Asp
    130                 135                 140

Gly Gly Gly Trp Thr Val Phe Gln Arg Arg Met Asp Gly Ser Val Asp
145                 150                 155                 160

Phe Tyr Arg Asp Trp Ala Ala Tyr Lys Gln Gly Phe Gly Ser Gln Leu
                165                 170                 175

Gly Glu Phe Trp Leu Gly Asn Asp Asn Ile His Ala Leu Thr Ala Gln
            180                 185                 190

Gly Ser Ser Glu Leu Arg Val Asp Leu Val Asp Phe Glu Gly Asn His
        195                 200                 205

Gln Phe Ala Lys Tyr Lys Ser Phe Lys Val Ala Asp Glu Ala Glu Lys
    210                 215                 220

Tyr Lys Leu Val Leu Gly Ala Phe Val Gly Gly Ser Ala Gly Asn Ser
225                 230                 235                 240

Leu Thr Gly His Asn Asn Asn Phe Phe Ser Thr Lys Asp Gln Asp Asn
                245                 250                 255

Asp Val Ser Ser Ser Asn Cys Ala Glu Lys Phe Gln Gly Ala Trp Trp
            260                 265                 270

Tyr Ala Asp Cys His Ala Ser Asn Leu Asn Gly Leu Tyr Leu Met Gly
        275                 280                 285

Pro His Glu Ser Tyr Ala Asn Gly Ile Asn Trp Ser Ala Ala Lys Gly
    290                 295                 300

Tyr Lys Tyr Ser Tyr Lys Val Ser Glu Met Lys Val Arg Pro Ala
305                 310                 315
```

<210> 147
<211> 187
<212> PRT
<213> Homo sapiens

<400> 147

```
Met Lys Ser Cys Phe Phe Val Leu Phe Leu Trp Thr Leu Leu Phe Glu
1               5                  10                  15

Val Gly Gln Ser Ser Pro His Thr Cys Pro Ser Gly Ser Pro Asn Gly
            20                  25                  30

Ile His Gln Leu Met Leu Pro Glu Glu Glu Pro Phe Gln Val Thr Gln
        35                  40                  45

Cys Lys Thr Thr Ala Arg Asp Trp Ile Val Ile Gln Arg Arg Leu Asp
    50                  55                  60

Gly Ser Val Asn Phe Asn Gln Ser Trp Phe Ser Tyr Lys Asp Gly Phe
65                  70                  75                  80

Gly Asp Pro Asn Gly Glu Phe Phe Ile Gly Leu Gln Lys Leu Tyr Leu
                85                  90                  95

Met Thr Arg Glu Gln Pro His Glu Leu Phe Ile Gln Leu Lys His Gly
            100                 105                 110

Pro Gly Ala Thr Val Tyr Ala His Phe Asp Asp Phe Gln Val Asp Ser
        115                 120                 125

Glu Thr Glu Leu Tyr Lys Leu Glu Arg Val Gly Lys Tyr Ser Gly Thr
    130                 135                 140

Ala Gly Asp Ser Leu Arg Tyr His Ile Asn Lys Arg Phe Ser Thr Phe
145                 150                 155                 160

Asp Arg Asp Asn Asp Glu Ser Ser Lys Asn Cys Ala Ala Glu His Gly
                165                 170                 175

Gly Gly Trp Trp Phe His Ser Cys Leu Ser Arg
            180                 185
```